San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

FEB 10 2016

Mr. John Martin
Tehachapi Cummings County Water
PO Box 326
Tehachapi, CA 93561

Re: Notice of Preliminary Decision – ATC / Certificate of Conformity
District Facility # S-4
Project # 1153831

Dear Mr. Martin:

Enclosed for your review is the District's analysis of an application for Authority to Construct for the facility identified above. You requested that a Certificate of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. The project authorizes four IC engines.

After addressing all comments made during the 30-day public notice and the 45-day EPA comment periods, the District intends to issue the Authority to Construct with a Certificate of Conformity. Please submit your comments within the 30-day public comment period, as specified in the enclosed public notice. Prior to operating with modifications authorized by the Authority to Construct, the facility must submit an application to modify the Title V permit as an administrative amendment, in accordance with District Rule 2520, Section 11.5.

If you have any questions, please contact Mr. Leonard Scandura, Permit Services Manager, at (661) 392-5500.

Thank you for your cooperation in this matter.

Sincerely,

Arnaud Marjollet
Director of Permit Services

AM: rue/ya

Enclosures

cc: Mike Tollstrup, CARB (w/enclosure) via email
cc: Gerardo C. Rios, EPA (w/enclosure) via email

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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San Joaquin Valley Air Pollution Control District
Authority to Construct Application Review
Full-Time Natural Gas-Fired IC Engines with Commissioning Period

Facility Name:	Tehachapi-Cummings County Water	Date:	February 1, 2016
Mailing Address:	PO Box 326 Tehachapi, CA 93561	Engineer:	Richard Edgehill
		Lead Engineer:	Steve Leonard
Contact Person:	John Martin and Nick Diercks		
Telephone:	(661) 822-5504 (JM) and (661) 377-0073 x 13(ND)		
Application #s:	S-4-10-1, -11-1, -12-1, and -13-1		
Project #:	S-1153831		
Complete:	March 11, 2015		

I. Proposal

Tehachapi-Cummings County Water District (TCCWD) has requested Authorities to Construct (ATCs) to reauthorize four 1,373 hp full-time natural gas-fired IC engines with NSCR catalyst. The new engines will replace four existing limited use (4000 hr/yr) natural gas-fired IC engines (S-4-5, '-6, '-7, and '-8). The replacement IC engines were previously authorized by ATCs S-4-10-0 through '-13-0 (project 1150704). This project reissued the ATCs to allow for a 40 hr commissioning period to "bake off" residual oil from the engine which can foul the catalyst.

Emissions from the IC engines trigger BACT and public notice. Offsets are not required.

Current permits S-4-5-12, '-6-11, '-7-11, and '- 8-12 (being cancelled) are included in **Attachment I**.

TCCWD has a Title V Permit. This modification can be classified as a Title V Minor Modification pursuant to Rule 2520, and can be processed with a Certificate of Conformity (COC). Since the facility has specifically requested that this project be processed in that manner, the 45-day EPA comment period will be satisfied prior to the issuance of the Authority to Construct. TCCWD must apply to administratively amend their Title V permit.

II. Applicable Rules

Rule 2201 New and Modified Stationary Source Review Rule (4/21/11)
Rule 2410 Prevention of Significant Deterioration (6/16/11)
Rule 2520 Federally Mandated Operating Permits (6/21/01)
Rule 4001 New Source Performance Standards (4/14/99) – NSPS Subpart JJJJ
Rule 4101 Visible Emissions (2/17/05)
Rule 4102 Nuisance (12/17/92)
Rule 4201 Particulate Matter Concentration (12/17/92)

Rule 4701 Stationary Internal Combustion Engines – Phase 1 (8/21/03)
Rule 4702 Internal Combustion Engines (11/14/13)
Rule 4801 Sulfur Compounds (12/17/92)
CH&SC 41700 Health Risk Assessment
CH&SC 42301.6 School Notice
California Environmental Quality Act (CEQA)

III. Project Location

The project is located south of Sebastian Rd., within Section 14, Township 11N, Range 18W, at the Tejon Ranch (Plant #1) 11.5 miles south of Arvin, CA. The equipment is not located within 1,000 feet of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

IV. Process Description

TCCWD operates a pumping plant (Plant #1) to pump water from the valley floor to the Tehachapi area. All engines are fueled with purchased PUC quality natural gas. The engines will be equipped with NSCR catalysts resulting in an expected NOx emissions concentration not exceeding 5 ppmv @ 15% O_2. Note that the engines have a name plate rating of 1,373 HP but operating limits of the facility keep the engines at 1,150 hp maximum (applicant 12-18-15 email). Applicant proposes the following ATC condition:

Horsepower rating of this IC engine shall not exceed 1,150 hp, as determined by maintaining the water pumping rate for each unit at or below the following amounts: one IC engine/pump operating – 8.2 cfs, two IC engine/pumps operating – 7.8 cfs, and three or more IC engine/pumps operating – 7.3 cfs. [District Rule 2201]

Commissioning Period

The manufacturer of the engines (GE Power and Water) states (letter dated 10-14-15) that the Waukesha VHP 5794GSI engines, which are equipped with emPact Emisssion Control System, must "be run for a minimum of 40 hrs prior to the catalyst elements being installed in the catalyst housing. This "run in" period is required to clear all debree and preservation oil in the flow path upstream of the catalyst. This protects the catalyst elements from experiencing any adverse conditions such as over-temperature or contamination during initial set up, which can irreversibly reduce catalyst efficiency and negatively affect catalyst out emission values."

During commissioning applicant proposes to install (sacrifice) one of the 3 catalyst elements (3 in series are required to achieve 5 ppmv @ 15% O_2). The expected emissions during commissioning are 0.65 g- NOx/hp-hr (65 ppmv @ 15% O_2) and 4.18 g-CO/hp-hr (492 ppmv @ 15% O_2). Daily monitoring of the engine exhausts during commissioning will be done using a portable analyzer to detect loss in catalyst activity with fouling. If the proposed emissions limits are exceeded during commisssing the catalyst unit will be replaced and the engine will be restarted. If a second exceedance of the NOx emission limit occurs a second catalyst element will be installed. The time duration of commissioning will be restricted to a maximum

of 40 hours per engine and only one engine can be commissioned at any one time. Any or all of the other engines may operate under normal conditions during commissioning of any one of the engines. The following condition is included on the ATC:

"During commissioning of units S-4-10, S-4-11, S-4-12, or S-4-13, no more than one of these units may operate at any given time under the commissioning operating parameters. Any number of the engines may operate under normal, non-commissioning, operating parameters during the commissioning of the units."

V. Equipment Listing

Pre-Project Equipment Description:

S-4-5-12: ~~LIMITED USE 1200 BHP WAUKESHA MODEL 5790GL S/N C-10634-1 NATURAL GAS-FIRED LEAN-BURN IC ENGINE POWERING A WATER PUMP WITH TURBOCHARGER AND INTERCOOLER (ENGINE #1, PLANT #1)~~ – TO BE CANCELLED UPON IMPLEMENATION OF '-10

S-4-6-11: ~~LIMITED USE 1070 BHP WAUKESHA MODEL 5790GL S/N 402992 NATURAL GAS-FIRED LEAN-BURN IC ENGINE POWERING A WATER PUMP (IC ENGINE #2, PLANT #1)~~ – TO BE CANCELLED UPON IMPLEMENATION OF '-11

S-4-7-11: ~~LIMITED USE 1070 BHP WAUKESHA MODEL 5790GL S/N 402993 NATURAL GAS-FIRED LEAN-BURN IC ENGINE POWERING A WATER PUMP (ENGINE #3, PLANT #1)~~ – TO BE CANCELLED UPON IMPLEMENATION OF '-12

S-4-8-12: ~~LIMITED USE 1070 BHP WAUKESHA MODEL 5790GL S/N C11010/1 NATURAL GAS-FIRED LEAN-BURN IC ENGINE POWERING A WATER PUMP (ENGINE #4, PLANT #1)~~ – TO BE CANCELLED UPON IMPLEMENATION OF '-13

Proposed ATCs:

S-4-10-1 through -13-1:

1,150 BHP WAUKESHA MODEL 5794GSI (OR EQUIVALENT) NATURAL GAS-FIRED RICH-BURN IC ENGINE WITH NON-SELECTIVE CATALYTIC REDUCTION, TURBOCHARGER AND INTERCOOLER POWERING A WATER PUMP

VI. Emission Control Technology Evaluation

The IC engines will emit NO_x, SO_x, PM10, CO, and VOC. To control NOx, CO, and VOC, these engines will be equipped with:

- Non-Selective Catalytic Reduction

Non-Selective Catalytic Reduction (NSCR) decreases NO_x, CO and VOC emissions by using a catalyst to promote the chemical reduction of NO_x into N_2 and O_2, and the chemical oxidation of VOC and CO into H_2O and CO_2.

VII. General Calculations

A. Assumptions

- The engines will be fired on PUC quality natural gas

- BHP to Btu/hr conversion: 2,542.5 Btu/bhp-hr
- EPA F-factor (@ 60 °F): 8,578 dscf/MMBtu (40 CFR 60 Appendix B)
- Fuel heating value: 1,000 Btu/dscf (District Policy APR-1720, dated 12/20/01)
- Thermal efficiency of engine is conservatively estimated at ≈ 30 %
- The existing engines S-4-5 through S-4-8 are permitted to operate 24 hrs/day and 4,000 hrs/year (Per current permit)
- For the 1st year, the proposed engines are allowed to operate 24 hrs/day, 8,720 hr per yr (steady state), and 40 hr per yr for commissioning as proposed by applicant.
- After the 1st year, operation is exclusively steady state for 8760 hy/yr.
- Emissions during the commissioning period are calculated using emissions factors provided by the applicant in the 12-18-15 email and listed below
- Only one engine at a time may be commissioned with any or all of the other engines operating simultaneously under normal (steady state) conditions
- For calculation of combined PE2 it is assumed that one IC engine is being commissioned and the remaining 3 IC engines are operating under normal conditions

B. Emission Factors

S-4 through '-8

Pre-Project Emission Factors for Each Engine			
Pollutant	Emission Factor (g/bhp-hr)	Emission Factor (ppmv @ 15% O2)	Source
NO_X	0.91	65	Current PTO
SO_X	0.011	--	Current PTO
PM_{10}	0.05	--	Current PTO
CO	4.18	492	Current PTO
VOC	1.5	--	Current PTO

S-10 though '-13 (steady state)

Post-Project Emission Factors for Each Engine			
Pollutant	Emission Factor (g/bhp-hr)	Emission Factor (ppmv @ 15% O2)	Source
NO_X	0.08	5	Project 1150704
SO_X	0.013	N/A	Per APR-1720 and Mass Balance Equation Below
PM_{10}	0.02	N/A	Project 1150704
CO	0.6	56	Project 1150704
VOC	0.15	25	Project 1150704

S-10 though '-13 (commissioning period)

Refer to **Attachment II** for emissions factor calculations

Post-Project Emission Factors for Each Engine			
Pollutant	Emission Factor (g/bhp-hr)	Emission Factor (ppmv @ 15% O2)	Source
NO_X	0.91	65	Applicant email 12-18-15
SO_X	0.013*		Per APR-1720 and Mass Balance Equation Below
PM_{10}	0.05		Applicant email 12-18-15
CO	4.18	492	"
VOC	0.15	25	"

*The emission factor for SO_x is calculated using the mass balance equation.

$$\frac{1\,grain \cdot S}{100\,scf} \times \frac{1\,scf}{1{,}000\,Btu} \times \frac{1\,lb}{7{,}000\,grain} \times \frac{2lb \cdot SO_2}{1lb \cdot S} \times \frac{2{,}542.5\,Btu}{hp \cdot hr} \times \frac{1}{30\%} \times \frac{453.6\,gram}{lb} = 0.013 \frac{gram \cdot SO_2}{hp \cdot hr}$$

C. Calculations

1. Pre-Project Potential to Emit (PE1)

The daily and annual PE1 for each engine is calculated in the following tables.

Daily PE1 for S-4-5								
NO_X	0.91	g/hp·hr x	1,200	hp x	24	hr/day x 1 lb/453.6 g =	57.8	lb/day
SO_X	0.0110	g/hp·hr x	1,200	hp x	24	hr/day x 1 lb/453.6 g =	0.7	lb/day
PM_{10}	0.05	g/hp·hr x	1,200	hp x	24	hr/day x 1 lb/453.6 g =	3.2	lb/day
CO	4.18	g/hp·hr x	1,200	hp x	24	hr/day x 1 lb/453.6 g =	265.4	lb/day
VOC	1.50	g/hp·hr x	1,200	hp x	24	hr/day x 1 lb/453.6 g =	95.2	lb/day

Annual PE1 for S-4-5								
NO_X	0.91	g/hp·hr x	1,200	hp x	4,000	hr/yr x 1 lb/453.6 g =	9,630	lb/yr
SO_X	0.0110	g/hp·hr x	1,200	hp x	4,000	hr/yr x 1 lb/453.6 g =	116	lb/yr
PM_{10}	0.05	g/hp·hr x	1,200	hp x	4,000	hr/yr x 1 lb/453.6 g =	529	lb/yr
CO	4.18	g/hp·hr x	1,200	hp x	4,000	hr/yr x 1 lb/453.6 g =	44,233	lb/yr
VOC	1.50	g/hp·hr x	1,200	hp x	4,000	hr/yr x 1 lb/453.6 g =	15,873	lb/yr

Daily PE1 for S-4-6 through -8								
NO_X	0.91	g/hp·hr x	1,070	hp x	24	hr/day x 1 lb/453.6 g =	51.5	lb/day
SO_X	0.0110	g/hp·hr x	1,070	hp x	24	hr/day x 1 lb/453.6 g =	0.6	lb/day
PM_{10}	0.05	g/hp·hr x	1,070	hp x	24	hr/day x 1 lb/453.6 g =	2.8	lb/day
CO	4.18	g/hp·hr x	1,070	hp x	24	hr/day x 1 lb/453.6 g =	236.4	lb/day
VOC	1.50	g/hp·hr x	1,070	hp x	24	hr/day x 1 lb/453.6 g =	84.8	lb/day

Annual PE1 for S-4-6 through -8								
NO_X	0.91	g/hp·hr x	1,070	hp x	4,000	hr/yr x 1 lb/453.6 g =	8,586	lb/yr
SO_X	0.0110	g/hp·hr x	1,070	hp x	4,000	hr/yr x 1 lb/453.6 g =	104	lb/yr
PM_{10}	0.05	g/hp·hr x	1,070	hp x	4,000	hr/yr x 1 lb/453.6 g =	472	lb/yr
CO	4.18	g/hp·hr x	1,070	hp x	4,000	hr/yr x 1 lb/453.6 g =	39,441	lb/yr
VOC	1.50	g/hp·hr x	1,070	hp x	4,000	hr/yr x 1 lb/453.6 g =	14,153	lb/yr

2. Post Project Potential to Emit (PE2)

The daily and annual PE2 for each engine is calculated in the following tables.

S-4-10, '-11, '-12, and '-13 (each)

Daily PE2 for each 1,150 bhp Engine								
NO_X	0.08	g/hp·hr x	1,150	hp x	24	hr/day x 1 lb/454 g =	4.9	lb/day
SO_X	0.013	g/hp·hr x	1,150	hp x	24	hr/day x 1 lb/454 g =	0.8	lb/day
PM_{10}	0.02	g/hp·hr x	1,150	hp x	24	hr/day x 1 lb/454 g =	1.2	lb/day
CO	0.6	g/hp·hr x	1,150	hp x	24	hr/day x 1 lb/454 g =	36.5	lb/day
VOC	0.15	g/hp·hr x	1,150	hp x	24	hr/day x 1 lb/454 g =	9.1	lb/day

Annual PE2 for each 1,150 bhp Engine								
NO_X	0.08	g/hp·hr x	1,150	hp x	8,720	hr/yr x 1 lb/454 g =	1,767	lb/yr
SO_X	0.013	g/hp·hr x	1,150	hp x	8,720	hr/yr x 1 lb/454 g =	287	lb/yr
PM_{10}	0.02	g/hp·hr x	1,150	hp x	8,720	hr/yr x 1 lb/454 g =	442	lb/yr
CO	0.6	g/hp·hr x	1,150	hp x	8,720	hr/yr x 1 lb/454 g =	13,253	lb/yr
VOC	0.15	g/hp·hr x	1,150	hp x	8,720	hr/yr x 1 lb/454 g =	3,313	lb/yr

40 hr commissioning period emissions S-4-10, '-11, '-12, and '-13 (each)

Pollutant	Emissions Factor (g/bhp-hr)	Rating (bhp)	Daily Hours of Operation (hrs/day)	Annual Hours of Operation (hrs/yr)	Daily PE2 (lb/day)	Annual PE2 (lb/yr)
NO_X	0.91	1150	24	40	**55.4**	**92**
SO_X	0.0130	1150	24	40	**0.8**	**1**
PM_{10}	0.05	1150	24	40	**3.0**	**5**
CO	4.18	1150	24	40	**254.3**	**424**
VOC	0.15	1150	24	40	**9.1**	**15**

Total 1st yr emissions steady state and commissioning

Each Engine

PE2		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO_X	55.4	1,767 + 92 = 1,859
SO_X	0.8	287 + 1 = 288
PM_{10}	3.0	442 + 5= 447
CO	254.3	13,253 + 424 = 13,677
VOC	9.1	3,313 + 15 = 3,328

Combined emissions from the 4 IC engines

PE2		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO_X	55.4 + 3 x 4.9 = 70.1	1,859 x 4 = 7,436
SO_X	0.8 + 3 x 0.8 = 3.2	288 x 4 = 1,152
PM_{10}	3.0 + 3 x 1.2 = 6.6	447 x 4 = 1,788
CO	254.3 + 3 x 36.5 = 363.8	13,677 x 4 = 54,708
VOC	9.1 x 4 = 36.4	3,328 x 4 = 13,312

Emissions profiles are included in **Attachment II.**

3. Pre-Project Stationary Source Potential to Emit (SSPE1)

Pursuant to District Rule 2201, the SSPE1 is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of Emission Reduction Credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions (AER) that have occurred at the source, and which have not been used on-site.

The SSPE1 is taken as the SSPE2 in Project S-1124511 and summarized below:

SSPE1 (lb/year)					
Permit Unit	NO_X	SO_X	PM_{10}	CO	VOC
S-4-5	9,630	116	529	44,233	15,873
S-4-6	8,586	104	472	39,441	14,153
S-4-7	8,586	104	472	39,441	14,153
S-4-8	8,586	104	472	39,441	14,153
S-4-9	194	0	1	182	152
SSPE1	35,582	428	1,945	162,738	58,484

4. Post Project Stationary Source Potential to Emit (SSPE2)

Pursuant to District Rule 2201, the SSPE2 is the PE from all units with valid ATCs or PTOs at the Stationary Source and the quantity of ERCs which have been banked since September 19, 1991 for AER that have occurred at the source, and which have not been used on-site.

SSPE2 (lb/year)					
Permit Unit	NO_X	SO_X	PM_{10}	CO	VOC
S-4-9	194	0	1	182	152
S-4-10*	1,859	288	447	13,677	3,328
S-4-11*	1,859	288	447	13,677	3,328
S-4-12*	1,859	288	447	13,677	3,328
S-4-13*	1,859	288	447	13,677	3,328
SSPE2	7,630	1,152	1,789	54,890	13,464

5. Major Source Determination

Rule 2201 Major Source Determination:

Pursuant to District Rule 2201, a Major Source is a stationary source with a SSPE2 equal to or exceeding one or more of the following threshold values. For the purposes of determining major source status the following shall not be included:

- any ERCs associated with the stationary source
- Emissions from non-road IC engines (i.e. IC engines at a particular site at the facility for less than 12 months)
- Fugitive emissions, except for the specific source categories specified in 40 CFR 51.165

Rule 2201 Major Source Determination (lb/year)						
	NO_X	SO_X	PM_{10}	$PM_{2.5}$	CO	VOC
SSPE1	35,582	428	1,945	1,945	162,738	58,484
SSPE2	7,436	1,152	1,788	1,788	54,708	13,312
Major Source Threshold	20,000	140,000	140,000	200,000	200,000	20,000
Major Source?	Yes	No	No	No	No	No

The source is a major source for NOx.

Rule 2410 Major Source Determination:

The facility or the equipment evaluated under this project is not listed as one of the categories specified in 40 CFR 52.21 (b)(1)(iii). Therefore the PSD Major Source threshold is 250 tpy for any regulated NSR pollutant.

PSD Major Source Determination (tons/year)						
	NO2	VOC	SO2	CO	PM	PM10
Estimated Facility PE before Project Increase	18	29	0	81	1	1
PSD Major Source Thresholds	250	250	250	250	250	250
PSD Major Source ? (Y/N)	N	N	N	N	N	N

As shown above, the facility is an existing PSD major source for at least one pollutant.

6. Baseline Emissions (BE)

The BE calculation (in lb/year) is performed pollutant-by-pollutant for each unit within the project to calculate the QNEC, and if applicable, to determine the amount of offsets required.

Pursuant to District Rule 2201, BE = PE1 for:

- Any unit located at a non-Major Source,
- Any Highly-Utilized Emissions Unit, located at a Major Source,
- Any Fully-Offset Emissions Unit, located at a Major Source, or
- Any Clean Emissions Unit, located at a Major Source.

otherwise,

BE = Historic Actual Emissions (HAE), calculated pursuant to District Rule 2201.

S-4-10 through '-13 (new engines)

Since the proposed engines are new, the BE = PE1 = 0.

7. SB 288 Major Modification

SB 288 Major Modification is defined in 40 CFR Part 51.165 as "any physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the Act."

This facility is currently a major source but will no longer be a major source as a result of this project. Since this facility will no longer be a major source for any of the pollutants addressed in this project, this project cannot constitute an SB 288 major modification.

8. Federal Major Modification

District Rule 2201 states that a Federal Major Modification is the same as a "Major Modification" as defined in 40 CFR 51.165 and part D of Title I of the CAA.

This facility is currently a major source but will no longer be a major source as a result of this project. Since this facility will no longer be a major source for any of the pollutants addressed in this project, this project cannot constitute a Federal Major Modification. Additionally, since the facility is not a major source for PM_{10} (140,000 lb/year), it is not a major source for PM2.5 (200,000 lb/year).

9. Rule 2410 – Prevention of Significant Deterioration (PSD) Applicability Determination

Rule 2410 applies to any pollutant regulated under the Clean Air Act, except those for which the District has been classified nonattainment. The pollutants which must be addressed in the PSD applicability determination for sources located in the SJV and which are emitted in this project are: (See 52.21 (b) (23) definition of significant)

- NO2 (as a primary pollutant)
- SO2 (as a primary pollutant)
- CO
- PM
- PM10

I. Project Emissions Increase - New Major Source Determination

The post-project potentials to emit from all new and modified units are compared to the PSD major source thresholds to determine if the project constitutes a new major source subject to PSD requirements.

The facility or the equipment evaluated under this project is not listed as one of the categories specified in 40 CFR 52.21 (b)(1)(i). The PSD Major Source threshold is 250 tpy for any regulated NSR pollutant.

PSD Major Source Determination: Potential to Emit (tons/year)						
	NO2	VOC	SO2	CO	PM	PM10
Total PE from New and Modified Units	3.7	6.7	0.6	27	0.9	0.9
PSD Major Source threshold	250	250	250	250	250	250
New PSD Major Source?	N	N	N	N	N	N

As shown in the table above, the potential to emit for the project, by itself, does not exceed any PSD major source threshold. Therefore Rule 2410 is not applicable and no further analysis is required.

9. Quarterly Net Emissions Change (QNEC)

The QNEC is used to complete the emission profile screen for the District's PAS database. The QNEC, which equals PE2/4 for each pollutant, is calculated as follows.

QNEC for Each Engine S-4-10-0 through -13-0			
Pollutant	PE1 (lb/yr)	PE2 (lb/yr)	QNEC (lb/qtr)
NO_x	0	1,859	465
SO_x	0	288	72
PM_{10}	0	447	112
CO	0	13,677	3,419
VOC	0	3,328	832

VIII. Compliance

Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

BACT requirements are triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis for the following*:

a. Any new emissions unit with a potential to emit exceeding two pounds per day,
b. The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding two pounds per day,
c. Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds per day, and/or
d. Any new or modified emissions unit, in a stationary source project, which results in an SB288 Major Modification or a Federal Major Modification.

*Except for CO emissions from a new or modified emissions unit at a Stationary Source with an SSPE2 of less than 200,000 pounds per year of CO.

a. New emissions units – PE > 2 lb/day

The following table demonstrates that BACT is triggered for NOx, PM10, and VOC for the IC engines.

New Emissions Unit BACT Applicability for All Engines				
Pollutant	Daily Emissions (lb/day)	BACT Threshold (lb/day)	SSPE2 (lb/yr)	BACT Triggered?
NO_X	55.4	> 2.0	n/a	Yes
SO_X	0.8	< 2.0	n/a	No
PM_{10}	3.0	> 2.0	n/a	Yes
CO	254.3	> 2.0 and SSPE2 ≥ 200,000 lb/yr	< 200,000 lb/yr	No
VOC	9.1	> 2.0	n/a	Yes

b. Relocation of Units

Since these are new units, BACT is not triggered for relocation purposes.

c. Modified Units

Since these are new units, BACT is not triggered for modification purposes.

d. SB288 Major Modification or a Federal Major Modification

As discussed in Sections VII.C.7 and VII.C.8 above, this project does not constitute an SB 288 Major Modification or Federal Major Modification for any criteria pollutant. Therefore, BACT for SB 288 Major Modification and Federal Major Modification purposes is not triggered for any pollutant.

2. BACT Guideline

BACT Guideline 3.3.12, applies to the natural gas-fired IC engines. [Fossil Fuel** Fired IC Engine > 50 hp] (See **Attachment III**).

There is no existing BACT Guideline for an IC engine commissioning period, which is considered nonroutine and highly unusual. Therefore a project specific BACT Analysis is done for this project.

3. Top-Down BACT Analysis – Attachment IV

Per Permit Services Policies and Procedures for BACT, a Top-Down BACT analysis shall be performed as a part of the application review for each application subject to the BACT requirements pursuant to the District's NSR Rule.

BACT was satisfied previously in project 1153821 (ATCs '-10-0 through '-13-0) with the following:

Steady State

NOx: 5 ppmv @ 15% O2
PM10: 0.02 g/bhp-hr
VOC: 25 ppmvd @15% O2

Commissioning Period – this project

Commissioning period not to exceed 40 cumulative hours during the initial startup of the engine. During the commissioning period, the operator shall perform expeditious completion of commissioning activities, and shall use good work practice standards to minimize emissions.

NOx: 65 ppmv @ 15% O2
PM10: 0.15 g/bhp-hr
VOC: 25 ppmvd @15% O2

B. Offsets

1. Offset Applicability

Offset requirements shall be triggered on a pollutant by pollutant basis and shall be required if the SSPE2 equals to or exceeds the offset threshold levels in Table 4-1 of Rule 2201.

The SSPE2 is compared to the offset thresholds in the following table.

Offset Determination (lb/year)					
	NO_X	SO_X	PM_{10}	CO	VOC
SSPE2	7,436	1,152	1,788	54,708	13,312
Offset Thresholds	20,000	54,750	29,200	200,000	20,000
Offsets calculations required?	No	No	No	No	No

2. Quantity of Offsets Required

As seen above, the SSPE2 is greater than the offset thresholds for NOx; therefore offset calculations are necessary.

However, BE = zero and SSPE2 < SSPE1 and offsets will not be required for this project.

C. Public Notification

1. Applicability

Public noticing is required for:

a. New Major Sources, Federal Major Modifications, and SB 288 Major Modifications,
b. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
c. Any project which results in the offset thresholds being surpassed, and/or
d. Any project with an SSIPE of greater than 20,000 lb/year for any pollutant.
e. Any project which results in a Title V significant permit modification

a. New Major Sources, Federal Major Modifications, and SB 288 Major Modifications

New Major Sources are new facilities, which are also Major Sources. Since this is not a new facility, public noticing is not required for this project for New Major Source purposes.

As demonstrated in Sections VII.C.7 and VII.C.8, this project does not constitute an SB 288 or Federal Major Modification; therefore, public noticing for SB 288 or Federal Major Modification purposes is not required.

b. PE > 100 lb/day

The PE2 for this new unit is compared to the daily PE Public Notice thresholds in the following table:

PE > 100 lb/day Public Notice Thresholds			
Pollutant	PE2 (lb/day)	Public Notice Threshold	Public Notice Triggered?
NO_X	55.4	100 lb/day	No
SO_X	0.8	100 lb/day	No
PM_{10}	2.8	100 lb/day	No
CO	254.3	100 lb/day	Yes
VOC	9.1	100 lb/day	No

Therefore, public noticing for PE > 100 lb/day purposes is required.

c. Offset Threshold

The SSPE1 and SSPE2 are compared to the offset thresholds in the following table.

Offset Thresholds				
Pollutant	SSPE1 (lb/year)	SSPE2 (lb/year)	Offset Threshold	Public Notice Required?
NO_X	35,582	7,436	20,000 lb/year	No
SO_X	428	1,152	54,750 lb/year	No
PM_{10}	1,945	1,788	29,200 lb/year	No
CO	162,738	54,708	200,000 lb/year	No
VOC	58,484	13,312	20,000 lb/year	No

As detailed above, there were no thresholds surpassed with this project; therefore public noticing is not required for offset purposes.

d. SSIPE > 20,000 lb/year

Public notification is required for any permitting action that results in a SSIPE of more than 20,000 lb/year of any affected pollutant. According to District policy, the SSIPE = SSPE2 – SSPE1. The SSIPE is compared to the SSIPE Public Notice thresholds in the following table.

SSIPE Public Notice Thresholds					
Pollutant	SSPE1 (lb/year)	SSPE2 (lb/year)	SSIPE (lb/year)	SSIPE Public Notice Threshold	Public Notice Required?
NO_x	35,582	7,436	<0	20,000 lb/year	No
SO_x	428	1,152	724	20,000 lb/year	No
PM_{10}	1,945	1,788	<0	20,000 lb/year	No
CO	162,738	54,708	<0	20,000 lb/year	No
VOC	58,484	13,312	<0	20,000 lb/year	No

As demonstrated above, the SSIPEs for all pollutants were less than 20,000 lb/year; therefore public noticing for SSIPE purposes is not required.

e. Title V Significant Permit Modification

As shown in the Discussion of Rule 2520 below, this project constitutes a Title V minor modification. Therefore, public noticing for Title V significant modifications is not required for this project.

2. Public Notice Action

As discussed above, this project will not result in emissions, for any pollutant, which would subject the project to any of the noticing requirements listed above. Therefore, public notice will not be required for this project.

D. Daily Emission Limits (DELs)

DELs and other enforceable conditions are required by Rule 2201 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. The DEL must be contained in the latest ATC and contained in or enforced by the latest PTO and enforceable, in a practicable manner, on a daily basis. DELs are also required to enforce the applicability of BACT.

Proposed Rule 2201 (DEL) Conditions:

For the new IC engines, the DELs are stated in the form of emission factors, the maximum engine horsepower rating, and the maximum operational time of 24 hours per day. For the ease of emissions measurements, the "g/bhp-hr" emission factors for NOx, VOC and CO are also stated in their corresponding values in "ppmv @ 15% oxygen".

The following conditions are listed on each permit to ensure compliance.

Steady State

- *Except during the commissioning period, emissions from this IC engine shall not exceed any of the following limits: 0.08 g-NOx/bhp-hr or 5 ppmv @ 15% O2, 0.013 g-SOx/bhp-*

hr, 0.02 g-PM10/bhp-hr, 0.6 g-CO/bhp-hr or 56 ppmv @ 15% O2, 0.15 g-VOC/bhp-hr or 25 ppmv @ 15% O2, VOC referenced as methane. [District Rules 2201 and 4702]

- *{3491} This IC engine shall be fired on Public Utility Commission (PUC) regulated natural gas only. [District Rules 2201 and 4801]*

Commissioning Period

- *During the commissioning period not to exceed 40 cumulative hours emissions from this IC engine shall not exceed 0.91 g-NOx/bhp-hr or 65 ppmv @ 15% O2, 0.013 g-SOx/bhp-hr, 0.05 g-PM10/bhp-hr, 13.3 g-CO/bhp-hr or 1,565 ppmv @ 15% O2, 0.15 g-VOC/bhp-hr or 25 ppmv @ 15% O2, VOC referenced as methane. [District Rules 2201 and 4702]*

- *During the commissioning period permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once daily using a portable emission monitor that meets District specifications. If either the NOx or CO concentrations corrected to 15% O2, as measured by the portable analyzer, exceed the allowable emission concentration, the catalyst unit(s) shall be added and/or replaced as necessary to bring the unit back into compliance. [District Rule 2201] N*

E. Compliance Assurance

1. Source Testing

The source test frequency is listed in the District Rule 4702 and 40 CFR 60, Subpart JJJJ discussions below.

- *Source testing to measure natural gas fuel combustion NOx, CO, and VOC emissions from this unit shall be conducted within 60 days of initial start-up and once every 8,760 hours of operation or 24 months, whichever comes first, thereafter. [District Rules 1081, 2201, and 4702 and 40 CFR 60, Subpart JJJJ]*

The source test methods and procedures are listed in the District Rule 4702 and 40 CFR 60, Subpart JJJJ discussions below.

2. Monitoring

Rule 2201 monitoring is required during commissioning as stated below. Monitoring is also required and discussed in the District Rule 4702 and 40 CFR 60, Subpart JJJJ discussions below. Rule 2201 monitoring is required during commissioning as stated below:

- *During the commissioning period permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once daily using a portable emission monitor that meets District specifications. If either the NOx or CO concentrations*

corrected to 15% O2, as measured by the portable analyzer, exceed the allowable emission concentration, the catalyst unit(s) shall be added and/or replaced as necessary to bring the unit back into compliance. [District Rule 2201] N

3. Recordkeeping

Recordkeeping is required to demonstrate compliance with the offset, public notification, and daily emission limit requirements of Rule 2201. As required by District Rule 4702, Stationary Internal Combustion Engines - Phase 2, this IC engine is subject to recordkeeping requirements. Recordkeeping requirements, in accordance with District Rule 4702, will be discussed in Section VIII, District Rule 4702, of this evaluation.

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201; however, monitoring is required and discussed in the District Rule 4702 and 40 CFR 60, Subpart JJJJ discussions below.

F. Ambient Air Quality Analysis (AAQA)

An AAQA shall be conducted for the purpose of determining whether a new or modified Stationary Source will cause or make worse a violation of an air quality standard. The District's Technical Services Division conducted the required analysis. Refer to **Attachment V** of this document for the AAQA summary sheet.

The proposed location is in an attainment area for NO_X, CO, and SO_X. As shown by the AAQA summary sheet the proposed equipment will not cause a violation of an air quality standard for NO_X, CO, or SO_X.

The proposed location is in a non-attainment area for the state's PM_{10} as well as federal and state $PM_{2.5}$ thresholds. As shown by the AAQA summary sheet the proposed equipment will not cause a violation of an air quality standard for PM_{10} and $PM_{2.5}$.

The results from the Criteria Pollutant Modeling are as follows:

Criteria Pollutant Modeling Results*

Diesel ICE	1 Hour	3 Hours	8 Hours.	24 Hours	Annual
CO	Pass	X	Pass	X	X
NO_x	Pass[1]	X	X	X	Pass
SO_x	Pass	Pass	X	Pass	Pass
PM_{10}	X	X	X	Pass[2]	Pass[3]
$PM_{2.5}$	X	X	X	Pass[2]	Pass[3]

*Results were taken from the attached PSD spreadsheet.
[1]The project was compared to the 1-hour NO2 National Ambient Air Quality Standard that became effective on April 12, 2010 using the District's approved procedures. The Ozone Limiting Method (OLM) or Plume Volume Molar Ratio Method (PVMRM) was used in accordance with the District's *Assessment of Non-Regulatory Options in AERMOD – Specifically OLM and PVMRM.* A completed AERMOD Non-Regulatory Option checklist is attached.
[2]A refined assessment was performed to compare the ambient air quality impacts from the existing unit(s) against the impacts from the new replacement unit(s). It was determined that the impacts from the replacement units would not cause an increase in impact at any receptor within the vicinity of the unit(s). Per APR1925, this passes the AAQA.
[3]The criteria pollutants are below EPA's level of significance as found in 40 CFR Part 51.165 (b)(2).

Rule 2410 Prevention of Significant Deterioration

As shown in Section VII. C. 9. above, this project does not result in a new PSD major source or PSD major modification. No further discussion is required.

Rule 2520 Federally Mandated Operating Permits

This facility is subject to this Rule, and has received their Title V Operating Permit. The proposed modification is a Minor Modification to the Title V Permit.

In accordance with Rule 2520, these modifications:

1. Do not violate requirements of any applicable federally enforceable local or federal requirement;
2. Do not relax monitoring, reporting, or recordkeeping requirements in the permit and are not significant changes in existing monitoring permit terms or conditions;
3. Do not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient impacts, or a visibility or increment analysis;
4. Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include:

a. A federally enforceable emission cap assumed to avoid classification as a modification under any provisions of Title I of the Federal Clean Air Act; and
b. An alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Federal Clean Air Act; and

5. Are not Title I modifications as defined in District Rule 2520 or modifications as defined in section 111 or 112 of the Federal Clean Air Act; and

6. Do not seek to consolidate overlapping applicable requirements.

As discussed above, the facility has applied for a Certificate of Conformity (COC). Therefore, the facility must apply to modify their Title V permit with an administrative amendment, prior to operating with the proposed modifications. Continued compliance with this rule is expected. The facility may construct/operate under the ATC upon submittal of the Title V administrative amendment application. Once the ATC permits in this project have been implemented and converted into a Permit to Operate, the facility will no longer be a Title V source.

The Title V Compliance Certification form is included in **Attachment VI**.

Rule 4001 New Source Performance Standards (NSPS)

This rule incorporates NSPS from Part 60, Chapter 1, Title 40, Code of Federal Regulations (CFR); and applies to all new sources of air pollution and modifications of existing sources of air pollution listed in 40 CFR Part 60. 40 CFR Part 60, Subpart JJJJ is the only subpart that applies to spark-ignited internal combustion engines.

The purpose of 40 CFR 60 Subpart JJJJ is to establish New Source Performance Standards to reduce emissions of NO_X, SO_X, PM, CO, and VOC from new stationary spark ignition (SI) internal combustion (IC) engines.

Pursuant to Section 60.4230, owners and operators of a stationary SI IC engine with a maximum engine power greater than or equal to 500 HP (except lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP) that commence modification or reconstruction after June 12, 2006 must comply with the provisions of this subpart. The proposed engines are greater than 500 bhp SI ICE that will be constructed after June 12, 2006; therefore, the engines are subject to this subpart.

Pursuant to Section 60.4233(e), owners and operators of a stationary SI ICE with a maximum engine power greater than or equal to 75 kW (100 bhp) must comply with the emission standards in 40 CFR 60, Subpart JJJJ, Table 1 for their stationary SI ICE. The proposed engines are greater than 100 bhp; therefore, the engines are subject to the emission standards in Table 1 of this subpart.

The requirements contained in 40 CFR 60, Subpart JJJJ, Table 1 for natural gas-fired 1,150 hp rich-burn SI ICEs are summarized in the table below:

Engine Type and Fuel	Maximum Engine Power	Manufacture Date	Emission Standards[a]					
			g/HP-hr			ppmvd at 15% O_2		
			NO_X	CO	VOC[b]	NO_X	CO	VOC[b]
Non-Emergency SI Natural Gas and Non-Emergency SI Lean Burn LPG (except lean burn 500 ≤ HP < 1,350	bhp ≥ 500	7/1/2007	2.0	4.0	1.0	160	540	86
		7/1/2010	1.0	2.0	0.7	82	270	60

[a] Owners and operators of stationary non-certified SI engines may choose to comply with the emission standards in units of either g/HP-hr or ppmvd at 15 percent O2.
[b] VOC emission concentrations reported as propane; For purposes of this subpart, when calculating emissions of volatile organic compounds, emissions of formaldehyde should not be included.

The proposed engines will satisfy the applicable standards of this subpart and the following condition will ensure compliance:

- *Emissions from this IC engine shall not exceed any of the following limits: 0.08 g-NOx/bhp-hr or 5 ppmv @ 15% O2, 0.013 g-SOx/bhp-hr, 0.02 g-PM10/bhp-hr, 0.6 g-CO/bhp-hr or 56 ppmv @ 15% O2, 0.15 g-VOC/bhp-hr or 25 ppmv @ 15% O2, VOC referenced as methane. [District Rules 2201 and 4702]*

Pursuant to Section 60.4234, an owner or operator of a stationary SI internal combustion engine must operate and maintain the engines such that they achieve the emission standards as required in 40 CFR 60.4233 over the entire life of the engine.

District Rule 4702 and the ATC permit for the proposed engines require adequate periodic monitoring to ensure that the applicable emission limits contained in the permit are met. Therefore, the requirements of this section will be satisfied.

Pursuant to Section 60.4243, an owner or operator of a non-certified stationary SI internal combustion engine rated greater than 500 bhp must keep a maintenance plan and records of conducted maintenance. Additionally an initial performance source test must be conducted and subsequent performance tests must be conducted every 8,760 hours or 3-years, whichever comes first. The operator of the proposed engine is also required to maintain records of maintenance and periodically source test to demonstrate compliance with District Rule 4702; therefore, the following conditions ensure compliance:

- *The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: the total hours of operation, type of fuel used, maintenance and modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rule 4702 and 40 CFR 60, Subpart JJJJ]*

- *Source testing to measure natural gas fuel combustion NOx, CO, and VOC emissions from this unit shall be conducted within 60 days of initial start-up and once every 8,760 hours of operation or 24 months, whichever comes first, thereafter. [District Rules 1081, 2201, and 4702 and 40 CFR 60, Subpart JJJJ]*

Pursuant to Section 60.4243(g) air-to-fuel ratio controllers used with the operation of three-way catalysts/non-selective catalytic reduction must be maintained and operated appropriately in order to ensure proper operation of the engine and control device to minimize emissions at all times. The following condition will be placed on the permit to ensure compliance:

- *Air-to-fuel ratio controller(s) shall be maintained and operated appropriately in order to ensure proper operation of the engine and control device to minimize emissions at all times. [District Rule 2201 and 40 CFR 60, Subpart JJJJ]*

Section 60.4244 requires that three separate test runs be conducted for each performance test and that each test run must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and last at least 1 hour. The following condition will be placed on the permits to ensure compliance:

- *For official emissions source testing, the arithmetic average of three 60-consecutive-minute test runs shall apply. Each test run shall be conducted within 10 percent of 100 percent peak (or the highest achievable) load. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as both methane and propane. VOC, NOx, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702 and 40 CFR 60, Subpart JJJJ]*

Section 60.4245(c) requires owners and operators of stationary SI ICE greater than or equal to 500 bhp that have not been certified by an engine manufacturer to meet the emission standards in Section 60.4231 to submit an initial notification as required in Section 60.7(a)(1). The notification must include the following:

1) Name and address of the owner or operator;
2) The address of the affected source;
3) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;
4) Emission control equipment; and
5) Fuel used.

The following condition will be placed on the permit to ensure compliance:

- *Notification of the date construction of this engine commenced shall be submitted to the District and EPA and shall be postmarked no later than 30 days after such date as construction commenced. The notification shall contain the following information: 1) Name and address of the owner or operator; 2) The address of the affected source; 3) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement; 4) Emission control equipment; and 5) Fuel used. Notification of construction and copies of source test results shall be submitted to EPA at*

the following address: Director, Air Division, U.S. Environmental Protection Agency, 75 Hawthorne Street, San Francisco, CA 94105. [40 CFR 60, Subpart JJJJ]

Section 60.4245(d) requires owners and operators of stationary SI ICE that are subject to performance testing must submit a copy of each performance test as conducted in §60.4244 within 60 days after the test has been completed. The following condition will be placed on the permit to ensure compliance:

- *The results of each source test shall be submitted to the District and EPA within 60 days after completion of the source test. [District Rule 1081 and 40 CFR 60, Subpart JJJJ]*

Table 2 of 40 CFR 60, Subpart JJJJ specifies methods and procedures for performance testing to demonstrate compliance with the applicable emission limits. The following condition will be placed on the permit to ensure compliance:

- *The following methods shall be used for official source testing: NOx (ppmv) - EPA Method 7E, CO (ppmv) - EPA Method 10, VOC (ppmv) - EPA Method 25A or 25B, stack gas oxygen - EPA Method 3 or 3A. Alternative test methods as approved by EPA, ARB, and the District may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4702 and 40 CFR 60, Subpart JJJJ]*

Rule 4101 Visible Emissions

Rule 4101 states that no air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. The following condition is listed on each permit to ensure compliance.

- *{15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]*

Rule 4102 Nuisance

Rule 4102 states that no air contaminant shall be released into the atmosphere which causes a public nuisance. Public nuisance conditions are not expected as a result of these operations, provided the equipment is well maintained. The following condition is listed on the facility-wide permit to ensure compliance.

- *{98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]*

California Health & Safety Code 41700 (Health Risk Assessment)

District Policy APR 1905 – *Risk Management Policy for Permitting New and Modified Sources* specifies that for an increase in emissions associated with a proposed new source or modification, the District perform an analysis to determine the possible impact to the nearest resident or worksite.

An HRA is not required for a project with a total facility prioritization score of less than one. According to the Technical Services Memo for this project (**Attachment V**), the total facility prioritization score including this project was greater than one. Therefore, an HRA was required to determine the short-term acute and long-term chronic exposure from this project.

The cancer risk for this project is shown below:

RMR Summary						
Categories	**1150 BHP NG ICE (Unit 10-1)**	**1150 BHP NG ICE (Unit 11-1)**	**1150 BHP NG ICE (Unit 12-1)**	**1150 BHP NG ICE (Unit 13-1)**	**Project Totals**	**Facility Totals**
Prioritization Score	>1.0	>1.0	>1.0	>1.0	>1.0[1]	>1.0[1]
Acute Hazard Index	0.07	0.07	0.07	0.07	0.28[1]	0.28[1]
Chronic Hazard Index	0.02	0.02	0.02	0.02	0.07[1]	0.07[1]
Maximum Individual Cancer Risk (10^{-6})	7.41	7.59	7.65	7.53	30.19[1]	30.19[1]
T-BACT Required?	**Yes**	**Yes**	**Yes**	**Yes**		
Special Permit Conditions?	**Yes**	**Yes**	**Yes**	**Yes**		

[1] This project is approvable because it satisfies the requirements in FYI 321, Section 3.C (i.e. the impacts from the new replacement units are less than or equal to the impacts from the existing units at all receptors). The cancer risks for each unit are only being used for the determination of each unit's T-BACT applicability.

Proposed Permit Conditions

To ensure that human health risks will not exceed District allowable levels; the following permit conditions must be included for:

Unit # 10-1, 11-1, 12-1, and 13-1

1. The permits and/or ATCs for S-4-5, S-4-6, S-4-7, S-4-8, S-4-14, S-4-15, S-4-16, and S-4-17 must be surrendered prior to the operation of the units under this ATC application.
2. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction.
3. The exhaust stack shall be no lower than 6.401 meters in height and no greater than 0.305 meters in diameter.
4. While commissioning any of units S-4-10, S-4-11, S-4-12, or S-4-13, each engine's emission rates shall not exceed the following: 2.31 lb/hr NOx, 0.033 lb/hr SOx, 0.12 lb/hr PM10, and 10.60 lb/hr CO.

5. No more than one (1) of units S-4-10, S-4-11, S-4-12, or S-4-13 may be commissioned at any given time. While commissioning any of these units, any number of the other three (3) units may be operated as long as they are operated under their normal, non-commissioning parameters.
6. Under normal, non-commissioning operation, each engine's emission rates shall not exceed the following: 0.204 lb/hr NOx, 0.033 lb/hr SOx, 0.05 lb/hr PM10, and 10.60 lb/hr CO.
7. Under normal, non-commissioning operation, each engine shall be operated with Non-Selective Catalytic Reduction (NSCR) at all times.

Discussion of T-BACT

BACT for toxic emission control (T-BACT) is required if the cancer risk exceeds one in one million. As demonstrated above, T-BACT is required for this project because the HRA indicates that the risk is above the District's thresholds for triggering T-BACT requirements.

For this project T-BACT is triggered for PM_{10} and VOC. T-BACT is satisfied with BACT for PM_{10} and VOC (see **Attachment III**), which is a PM10 limit of 0.02 g/bhp-hr and a VOC limit of 25 ppmvd @ 15%O2 (0.15 g/bhp-hr).

Rule 4201 Particulate Matter Concentration

This Rule requires the particulate matter emissions from each engine to be less than or equal to the rule limit of 0.1 grain per dry standard cubic foot. The following calculation demonstrates compliance with this limit.

$$\frac{0.05\,g\cdot PM}{hp\cdot hr}\times\frac{1\,hp\cdot hr}{2{,}543\ Btu}\times\frac{10^6\,Btu}{8{,}578\,ft^3}\times\frac{0.25\,Btu_{out}}{1\,Btu_{in}}\times\frac{15.43\,grain}{gram}=0.009\frac{grain\cdot PM}{ft^3}$$

The following condition is listed on each engine permit to ensure compliance.

- *{14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]*

Rule 4701 Internal Combustion Engines

Pursuant to Section 7.6.3.3.2 of Rule 4702, engines that are subject to Section 5.1 of Rule 4702, are no longer subject to Rule 4701.

Since these engines are subject to the requirements of Section 5.1 of Rule 4702, Rule 4701 is not applicable to these engines.

Rule 4702 Internal Combustion Engines

The purpose of this rule is to limit the emissions of nitrogen oxides (NO_X), carbon monoxide (CO), and volatile organic compounds (VOC) from internal combustion engines.

This rule applies to any internal combustion engine with a rated brake horsepower greater than 50 horsepower.

The proposed engine in this project is subject to the rule.

Section 5.1 applies to only Non-Agricultural Operations (Non-AO) IC engines up to 50 hp – **not applicable.**

Section 5.2 Table 2

Table 2 Emission Limits for a Spark-Ignited Internal Combustion Engine Rated at >50 bhp Used Exclusively in Non-AO (All ppmv limits are corrected to 15% oxygen on a dry basis). Emission Limits are effective according to the compliance schedule specified in Section 7.5.			
Engine Type	NOx Limit (ppmv)	CO Limit (ppmv)	VOC Limit (ppmv)
1. Rich-Burn			
d. Rich-Burn Engine, not listed above	11	2000	250

The applicant has proposed 5 ppmv-NO_x @ 15% O_2, 56 ppmv-CO @ 15% O_2 and 25 ppmv-VOC @ 15% O_2. Since these limits are lower than both Table 1 and Table 2 limits, compliance with Section 5.2 is expected.

Section 5.3 applies to CEMs. The proposed engines do not have CEMs; therefore, this section is **not applicable**

Sections 5.4 and 5.5 apply to compliance demonstration with percent emissions reductions. The proposed engines are not proposing to meet the NOx emission limits of Section 5.2 by percent emission reduction; therefore, this section is **not applicable**

Section 5.6 applies to annual fee payment. The proposed engines are not demonstrating compliance by paying an annual fee; therefore, this section is **not applicable**.

Section 5.7 applies to sulfur oxide (SOx) control requirements. The proposed engines will meet the Section 5.7.2 requirement by operating exclusively on PUC-quality natural gas.

Section 5.8 Monitoring Requirements

Requires the operator with an engine equipped with an external control device to either install, operate, and maintain continuous monitoring equipment (CEMs) for NOx, CO, and oxygen, as identified in Rule 1080 (Stack Monitoring), or install, operate, and maintain APCO-approved alternate monitoring consisting of one or more of the following:

- Periodic NO_x and CO emission concentrations,
- Engine exhaust oxygen concentration,

- Air-to-fuel ratio,
- Flow rate of reducing agents added to engine exhaust,
- Catalyst inlet and exhaust temperature,
- Catalyst inlet and exhaust oxygen concentration,
- Other operational characteristics.

Since the applicant has selected periodic monitoring of emissions with a portable analyzer, the following conditions are listed on each permit to ensure compliance.

During non-commissioning operation, the permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every calendar quarter (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall be performed not less than once every month for 12 months if 2 consecutive deviations are observed during quarterly monitoring. Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the last quarter if on a quarterly monitoring schedule. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Y

During non-commissioning operation, if either the NOx or CO concentrations corrected to 15% O2, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Y

During non-commissioning operation, all alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4702] Y

During both commissioning and non-commissioning operation, the permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 15%

O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Y

Section 5.8.2 – requires engines not subject to 5.8.1 to have their operational characteristics monitored as recommended by the engine manufacturer or emission control system supplier, and approved by the APCO. The proposed engines are subject to Section 5.8.1; therefore, Section 5.8.2 is **not applicable**.

Section 5.8.3 For each engine with an alternative monitoring system, submit to, and receive approval from the APCO, adequate verification of the alternative monitoring system's acceptability. This would include data demonstrating the system's accuracy under typical operating conditions for the specific application and any other information or data deemed necessary in assessing the acceptability of the alternative monitoring system. The alternate monitoring proposed is District-approved.

Section 5.8.4 – requires IC engines equipped with CEMS to operate the CEMS in compliance with the requirements of 40 Code of Federal Regulations (CFR) Part 51, 40 CFR Parts 60.7 and 60.13 (except subsection h), 40 CFR Appendix B (Performance Specifications), 40 CFR Appendix F (Quality Assurance Procedures), and applicable provisions of Rule 1080 (Stack Monitoring). The proposed engines in this project are not equipped with CEMS; therefore, Section 5.8.4 is **not applicable**.

Section 5.8.5 – requires that the APCO approve the data gathering and retrieval capabilities of an installed monitoring system. Section 5.8.5 is **not applicable** since the applicant is not using an installed monitoring system on the proposed engines.

Section 5.8.6 – requires the operator to install and operate a nonresettable elapsed operating time meter. In lieu of installing a nonresettable time meter, the owner or operator may use an alternative device, method, or technique in determining operating time provided that the alternative is approved by the APCO and is allowed by Permit-to-Operate or Stationary Equipment Registration condition. The owner of the engine shall properly maintain and operate the time meter or alternative device in accordance with the manufacturer's instructions.

The following condition will be listed on the permits to ensure compliance with Section 5.8.6:

- *{3404} This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702]*

Section 5.8.7 requires that for each engine, the permittee implement the Inspection and Monitoring (I&M) plan, if any, submitted to and approved by the APCO pursuant to Section 6.5. The pre-approved alternate emissions monitoring procedure proposed in Section 5.8.1 above will satisfy the requirements of Section 5.8.7. Therefore, compliance with Section 5.8.7 is expected.

- *This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702]*

Section 5.8.8 requires the operator to collect data through the I&M plan in a form approved by the APCO. By following the pre-approved alternate emissions monitoring procedure proposed in Section 5.8.1 above, the applicant will be collecting data in a form approved by the APCO. Therefore, compliance with Section 5.8.8 is expected

The owner/operator shall submit to the APCO for approval, and Inspection and Maintenance (I&M) plan that specifies all actions to be taken to satisfy all of the requirements of Rule 4702 Sections 5.8 and 6.5. [District Rule 4702] Y

The operator shall collect data through the I&M plan in a form approved by the APCO. [District Rule 4702]

Section 5.8.9 requires that a portable NO_x analyzer be used to take NO_x emission readings to verify compliance with the emission requirements of Section 5.1during each calendar quarter in which a source test is not performed. The data must be taken and reported as approved by the APCO. This requirement is identified in the alternate monitoring section above and by inclusion of the following ATC condition:

During both commissioning and non-commissioning operation, the permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 15% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Y

Section 5.9 lists monitoring requirements for all other engines not subject to the monitoring requirements of Section 5.8. The proposed engines are subject to the monitoring requirements of Section 5.8. Therefore, this section does not apply.

Section 5.10 lists SOx emissions monitoring requirements for engines that satisfy the SOx emission control requirements of Section 5.7 by complying with either Sections 5.7.2, 5.7.5, or 5.7.6. The engines will be fired solely on PUC-regulated natural gas, with a known sulfur content limits/requirement; therefore, this section is satisfied and no further discussion is required.

Section 5.11 applies to engines used in AO subject to Permit-Exempt Equipment Registration. The engines are not used in AO. Therefore, this section **does not apply**.

Section 6.1 requires that the operator of an engine to submit to the APCO an emission control plan of all actions to be taken to satisfy the emission requirements of Section 5.2 and the compliance schedules of Section 7.0.

As discussed above, the proposed engines already comply with the emission requirements of Section 5.2 ahead of the compliance schedules of Section 7.0. Therefore, an **emission control plan for these engines is not required.**

Section 6.2.1 requires the operator of an engine subject to the requirements of Section 5.2 of this rule shall maintain an engine operating log to demonstrate compliance with this rule. This information shall be retained for a period of at least five years, shall be readily available, and be made available to the APCO upon request. The engine operating log shall include, on a monthly basis, the following information:

- Total hours of operation,
- Type of fuel used,
- Maintenance or modifications performed,
- Monitoring data,
- Compliance source test results, and
- Any other information necessary to demonstrate compliance with this rule.

The following conditions will be added to the permits to ensure compliance with Section 6.2.1:

- *{3788} The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 15% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702]*

- *{3797} The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rule 4702 and 40 CFR 60, Subpart JJJJ]*

Section 6.2.2 requires that the data collected pursuant to the requirements of Section 5.8 and Section 5.9 shall be maintained for at least five years, shall be readily available, and made available to the APCO upon request. The following condition will be added to the permits ensure compliance:

- *{3498} All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. For units at unstaffed sites or operated remotely, records may be maintained and retained at a District-approved off-site location. [District Rules 2201 and 4702]*

Section 6.2.3 applies to operators claiming an exemption under Section 4.2 or Section 4.3. The proposed engines are not exempt from any requirements under Sections 4.2 or 4.3. Therefore, this section **does not apply**.

Section 6.3 identifies the source testing requirements. Engines retrofitted with exhaust control devices must comply with Sections 6.3.2 through 6.3.4 (source testing frequency, under normal conditions, source test protocol).The following conditions are listed on each permit to ensure compliance.

- *Source testing to measure natural gas fuel combustion NOx, CO, and VOC emissions from this unit shall be conducted within 60 days of initial start-up and once every 8,760 hours of operation or 24 months, whichever comes first, thereafter. [District Rules 1081, 2201, and 4702 and 40 CFR 60, Subpart JJJJ]*

- *{modified 3791} Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702]*

- *{3792} For official emissions source testing, the arithmetic average of three 60-consecutive-minute test runs shall apply. Each test run shall be conducted within 10 percent of 100 percent peak (or the highest achievable) load. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as both methane and propane. VOC, NOx, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702 and 40 CFR 60, Subpart JJJJ]*

Section 6.3.5 states that engines that are limited to be fueled exclusively with PUC quality natural gas shall not be subject to the reoccurring source test requirement of Section 6.3.2 for VOC emissions. However, the reoccurring source testing is required pursuant to District Policy ARP-1705, since the VOC limit is not from Rule 4702 but from BACT.

Section 6.3.6 (representative source testing) allows for representative source testing from an engine or engines that represents a specified group of engines, provided the necessary requirements are met. The following conditions will be listed on the permits to ensure compliance:

- *Compliance with the applicable emission limits of NOx, CO, and VOC shall be demonstrated by submittal of annual emission test results, within 30 days of the test date, to the District, from a unit or units that represents a specified group of units, provided all of the following are requirements are satisfied: The units are located at the same stationary source; the units were produced by the same manufacturer, have the same model number or other manufacturer's designation in common, and have the same rated capacity and operating specifications; the units are operated and maintained in a similar manner; and at least 20% of the total number of units are tested during each annual test cycle. [District Rule 4702]*

- *If any of the representative units exceed the required emission limits, or if the District notifies the operator that the criteria in Sections 6.3.6.1 through 6.3.6.5 have not been fulfilled, each of the units in the group shall individually demonstrate compliance by emissions testing. Failure to complete emissions testing within 90 days of the failed test*

shall result in the untested units being in violation of this rule. After compliance with the requirements of Section 6.3.6.6 has been demonstrated, subsequent source testing shall be performed pursuant to Sections 6.3.2 or 6.3.6. [District Rule 4702]

Section 6.4 requires that the compliance with the requirements of Section 5.2 shall be determined in accordance with the following test procedures or any other method approved by EPA and the APCO:

- Oxides of nitrogen - EPA Method 7E, or ARB Method 100.
- Carbon monoxide - EPA Method 10, or ARB Method 100.
- Stack gas oxygen - EPA Method 3 or 3A, or ARB Method 100.
- Volatile organic compounds - EPA Method 25A or 25B, or ARB Method 100. Methane and ethane, which are exempt compounds, shall be excluded from the result of the test.
- Operating horsepower determination - any method approved by EPA and the APCO.
- Oxides of sulfur – EPA Method 6C or 8, or ARB Method 100.

The following conditions are listed on each permit to ensure compliance.

- *The following methods shall be used for official source testing: NOx (ppmv) - EPA Method 7E, CO (ppmv) - EPA Method 10, VOC (ppmv) - EPA Method 25A or 25B, stack gas oxygen - EPA Method 3 or 3A. Alternative test methods as approved by EPA, ARB, and the District may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4702 and 40 CFR 60, Subpart JJJJ]*

- *{109} Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]*

- *The results of each source test shall be submitted to the District and EPA within 60 days after completion of the source test. [District Rule 1081 and 40 CFR 60, Subpart JJJJ]*

Section 6.5 requires that the operator of an engine subject to the requirements of Section 5.2 or the requirements of Section 8.0 shall submit to the APCO for approval an I&M plan that specifies all actions to be taken to satisfy the following requirements and the requirements of Section 5.8. The actions to be identified in the I&M plan shall include, but are not limited to, the following requirements listed in Sections 6.5.2 through 6.5.9. If there is no change to the previously approved I&M plan, the operator shall submit a letter to the District indicating that previously approved plan is still valid.

Section 6.5.1 states the requirements of Section 6.5.2 through 6.5.9 shall apply to the following engines:

- Engines that have been retrofitted with an exhaust control device, except those certified per Section 9.0;
- Engines subject to Section 8.0;

- An AO spark-ignited engine that is subject to the requirements of Section 8.0;
- An AO spark-ignited engine that has been retrofitted with a catalytic emission control and is not subject to the requirements of Section 8.0.

The proposed engines have an exhaust control device. Therefore, Sections 6.5.2 through 6.5.9 apply.

Section 6.5.2 requires procedures for establishing ranges for control equipment parameters, engine operating parameters, and engine exhaust oxygen concentrations that source testing has shown result in pollutant concentrations within the rule limits.

Section 6.5.3 requires procedures for monthly inspections as approved by the APCO. The applicable control equipment parameters and engine operating parameters will be inspected and monitored weekly (proposed by the applicant) in conformance with a regular inspection schedule listed in the I&M plan. Such weekly inspection and monitoring of the control equipment and engine operating parameters will be accompanied by quarterly emissions monitoring as specified in the approved alternate monitoring plan.

Section 6.5.4 requires procedures for the corrective actions on the noncompliant parameter(s) that the owner or operator will take when an engine is found to be operating outside the acceptable range for control equipment parameters, engine operating parameters, and engine exhaust NOx, CO, VOC, or oxygen concentrations.

Section 6.5.5 requires procedures for the owner or operator to notify the APCO when an engine is found to be operating outside the acceptable range for control equipment parameters, engine operating parameters, and engine exhaust NOx, CO, VOC, or oxygen concentrations.

The alternate monitoring scheme proposed in Section 5.8.1 above will satisfy the requirements of Sections 6.5.2, 6.5.3, 6.5.4 and 6.5.5 of the rule. Therefore, compliance with Sections 6.5.2, 6.5.3, 6.5.4, and 6.5.5 is expected.

Section 6.5.6 requires procedures for preventive and corrective maintenance performed for the purpose of maintaining an engine in proper operating condition. The alternate monitoring procedure proposed in Section 5.6.1 above will satisfy the requirements of Section 6.5.6. Moreover, the applicant will operate and maintain engine according to the manufacturer's specifications:

- *This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702]*

Section 6.5.7 requires procedures and a schedule for using a portable NOx analyzer to take NOx emission readings pursuant to Section 5.6.9. The alternate monitoring procedure proposed in Section 5.6.1 above will ensure compliance with the requirements of Section 6.5.7.

Section 6.5.8 requires procedures for collecting and recording required data and other information in a form approved by the APCO including, but not limited to, data collected through the I&M plan and the monitoring systems described in Sections 5.6.1 and 5.6.2. Data collected through the I&M plan shall have retrieval capabilities as approved by the APCO.

The data collection and recordkeeping requirement described in Section 6.2.1 above will satisfy the requirements of Section 6.5.8.

Section 6.5.9 specifies procedures for revising the I&M plan. The owner of an engine may request a change to the I&M plan at any time. The I&M plan shall be updated to reflect any change in operation and prior to any planned change in operation. An engine owner that changes significant I&M plan elements must notify the District no later than seven days after the change and must submit an updated I&M plan to the APCO no later than 14 days after the change for approval. The date and time of the change to the I&M plan shall be recorded in the engine operating log. For new engines and modifications to existing engines, the I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit-to-Operate. Therefore, the following condition will be listed on the ATC to ensure compliance with Section 6.5.9:

- *The owner/operator shall submit to the APCO for approval, and Inspection and Maintenance (I&M) plan that specifies all actions to be taken to satisfy all of the requirements of Rule 4702 Sections 5.8 and 6.5. [District Rule 4702]*

- *{3212} The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702]*

Section 8.0 allows an operator to comply with the NOx emission requirements of Section 5.2 for a group of engines by aggregating their NOx emissions.

The facility has not requested to comply with an Alternative Emission Control Plan in lieu of the requirements of Section 5.2. Therefore, this section will not be addressed.

Rule 4801 Sulfur Compounds

Rule 4801 requires that sulfur compound emissions (as SO_2) shall not exceed 0.2% by volume. Using the ideal gas equation, the sulfur compound emissions are calculated as follows:

Volume $SO_2 = \frac{(n \cdot R \cdot T)}{P}$, where

n = moles SO_2

T (standard temperature) = 60 °F or 520 °R

R (universal gas constant) = $\frac{10.73\ psi \cdot ft^3}{lb\text{-}mol \cdot °R}$

$$\frac{1\ grains \cdot S}{100\ scf} \times \frac{2\ grains \cdot SO_2}{grain \cdot S} \times \frac{1\ lb}{7{,}000\ grains} \times \frac{1\ scf}{1{,}355\ Btu} \times \frac{1{,}000{,}000}{MM} = 0.0021 \frac{lb \cdot SO_2}{MMBtu}$$

$$\frac{0.0021\ lb\text{-}SO_2}{MMBtu} \times \frac{1\ MMBtu}{8{,}578\ dscf} \times \frac{1\ lb\text{-}mol}{64\ lb} \times \frac{10.73\ psi \cdot ft^3}{lb\text{-}mol \cdot °R} \times \frac{520°R}{14.7\ psi} \times \frac{1{,}000{,}000\ parts}{million} = 1.5 \frac{parts \cdot SO_x}{million}$$

Since 1.1 ppmv is ≤ 2,000 ppmv, all engines are expected to comply with Rule 4801. Firing on PUC quality natural gas will ensure compliance.

California Health & Safety Code 42301.6 (School Notice)

The District has verified that this site is not located within 1,000 feet of a school. Therefore, pursuant to California Health and Safety Code 42301.6, a school notice is not required.

California Environmental Quality Act (CEQA)

CEQA requires each public agency to adopt objectives, criteria, and specific procedures consistent with CEQA Statutes and the CEQA Guidelines for administering its responsibilities under CEQA, including the orderly evaluation of projects and preparation of environmental documents. The District adopted its *Environmental Review Guidelines* (ERG) in 2001. The basic purposes of CEQA are to:

- Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities;
- Identify the ways that environmental damage can be avoided or significantly reduced;
- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible; and
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

Greenhouse Gas (GHG) Significance Determination

<u>District is a Lead Agency & GHG emissions increases are from the combustion of fossil fuel other than jet fuels</u>

It is determined that no other agency has prepared or will prepare an environmental review document for the project. Thus the District is the Lead Agency for this project.

On December 17, 2009, the District's Governing Board adopted a policy, APR 2005, *Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency,* for addressing GHG emission impacts when the District is

Lead Agency under CEQA and approved the District's guidance document for use by other agencies when addressing GHG impacts as lead agencies under CEQA. Under this policy, the District's determination of significance of project-specific GHG emissions is founded on the principal that projects with GHG emission reductions consistent with AB 32 emission reduction targets are considered to have a less than significant impact on global climate change. Consistent with District Policy 2005, projects complying with an approved GHG emission reduction plan or GHG mitigation program, which avoids or substantially reduces GHG emissions within the geographic area in which the project is located, would be determined to have a less than significant individual and cumulative impact for GHG emission.

The California Air Resources Board (ARB) adopted a Cap-and-Trade regulation as part one of the strategies identified for AB 32. This Cap-and-Trade regulation is a statewide plan, supported by a CEQA compliant environmental review document, aimed at reducing or mitigating GHG emissions from targeted industries. Facilities subject to the Cap-and-Trade regulation are subject to an industry-wide cap on overall GHG emissions. Any growth in emissions must be accounted for under that cap such that a corresponding and equivalent reduction in emissions must occur to allow any increase. Further, the cap decreases over time, resulting in an overall decrease in GHG emissions.

Under District policy APR 2025, *CEQA Determinations of Significance for Projects Subject to ARB's GHG Cap-and-Trade Regulation*, the District finds that the Cap-and-Trade is a regulation plan approved by ARB, consistent with AB32 emission reduction targets, and supported by a CEQA compliant environmental review document. As such, consistent with District Policy 2005, projects complying project complying with Cap-and-Trade requirements are determined to have a less than significant individual and cumulative impact for GHG emissions.

The GHG emissions increases associated with this project result from the combustion of fossil fuel(s), other than jet fuel, delivered from suppliers subject to the Cap-and-Trade regulation. Therefore, as discussed above, consistent with District Policies APR 2005 and APR 2025, the District concludes that the GHG emissions increases associated with this project would have a less than significant individual and cumulative impact on global climate change.

District CEQA Findings

The District is the Lead Agency for this project because there is no other agency with broader statutory authority over this project. The District performed an Engineering Evaluation (this document) for the proposed project and determined that the activity will occur at an existing facility and the project involves negligible expansion of the existing use. Furthermore, the District determined that the activity will not have a significant effect on the environment. The District finds that the activity is categorically exempt from the provisions of CEQA pursuant to CEQA Guideline § 15301 (Existing Facilities), and finds that the project is exempt per the general rule that CEQA applies only to

projects which have the potential for causing a significant effect on the environment (CEQA Guidelines §15061(b)(3)).

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Pending a successful Public Noticing period, issue ATCs S-4-10-1 through S-4-13-1 listed in **Attachment VIII**.

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
S-4-10-1 through S-13-1 (each)	3020-10-F	1,150 bhp IC engine	$785

Attachments

I. Current PTOs
II: Emissions Profiles
III. BACT Guideline
IV: BACT Analysis
V: HRA
VI: Compliance Certification
VII. Draft ATCs

Attachment I
Current PTOs

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-4-5-12 **EXPIRATION DATE:** 08/31/2017

SECTION: 5 **TOWNSHIP:** 31S **RANGE:** 25E

EQUIPMENT DESCRIPTION:
LIMITED USE 1200 BHP WAUKESHA MODEL 5790GL S/N C-10634-1 NATURAL GAS-FIRED LEAN-BURN IC ENGINE POWERING A WATER PUMP WITH TURBOCHARGER AND INTERCOOLER (ENGINE #1, PLANT #1)

PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
2. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [District Rules 4801 and Kern County Rule 407] Federally Enforceable Through Title V Permit
3. Utilization of this IC engine shall not exceed 1,200 hp, as determined by maintaining the water pumping rate for each unit at or below the following amounts: one IC engine/pump operating - 9.2 cfs, two IC engine/pumps operating - 8.6 cfs, and three or more IC engine/pumps operating - 8.1 cfs. [District Rule 2201] Federally Enforceable Through Title V Permit
4. This unit shall only be fired on Public Utility Commission (PUC) regulated natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
5. This engine shall be equipped with a positive crankcase ventilation (PCV) system that directs crankcase emissions into the exhaust system. [District Rule 2201] Federally Enforceable Through Title V Permit
6. IC engine shall be operated no more than 4,000 hours per calendar year. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
7. Emissions from this IC engine shall not exceed any of the following limits: 65 ppmvd NOx @ 15% O2, equivalent to 0.91 g-NOx/hp-hr, 0.011 g-SOx/hp-hr, 0.05 g-PM10/hp-hr, 492 ppmvd CO @ 15% O2, equivalent to 4.18 g-CO/hp-hr, or 309 ppmvd VOC @ 15% O2, equivalent to 1.50 g-VOC/hp-hr. [District Rules 2201, 4701, and 4702] Federally Enforceable Through Title V Permit
8. Source testing to measure natural gas-combustion NOx, CO, and VOC emissions from this unit shall be measured not less than once every 24 months, except as follows. Compliance with the NOx, CO, and VOC emission limits shall be demonstrated by submittal of annual emission test results from a unit or units that represents a specified group of units, provided all of the following requirements are satisfied: the units are located at the same stationary source; the units were produced by the same manufacturer, have the same model number or other manufacturer's designation in common, and have the same rated capacity and operating specification; the units are operated and maintained in a similar manner; and at least 20% of the total number of units are tested during each annual test cycle. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
9. Should any of the representative units exceed the required emission limits, or if the District notifies the operator that the criteria in for representative testing have not been fulfilled, each of the units in the group shall individually demonstrate compliance by emissions testing. Failure to complete emissions testing within 90 days of the failed test shall result in the untested units being in violation of this rule. [District Rule 4702] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

10. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit

11. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. VOC, NOx, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit

12. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) - EPA Method 25 or EPA Method 18 referenced as methane. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit

13. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

14. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

15. The acceptable exhaust gas O2 range shall be established from manufacturer's information, or by source testing this unit. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit

16. The permittee shall install and operate a nonresettable fuel meter and a nonresettable elapsed operating time meter. In lieu of installing a nonresettable fuel meter, the owner or operator may use a non-resettable elapsed operating time meter in conjunction with the engine manufacturer's maximum rated fuel consumption to determine annual fuel usage. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit

17. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Maintenance (I&M) plan submitted to the District. [District Rule 4702] Federally Enforceable Through Title V Permit

18. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit

19. The permittee shall monitor and record the stack concentration of O2 at least once every month and the stack concentration of NOx and O2 at least once every calendar quarter (in which a source test is not performed) using a portable emission monitor that meets District specifications. [In-stack O2 monitors may be allowed if approved by the APCO.] Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last month. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit

20. If either the O2 concentration or the NOx concentration corrected to 15% O2, as measured by the portable analyzer, is outside the permitted range, the permittee shall return the O2 and/or NOx to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue outside the permitted range after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

21. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
22. The permittee shall maintain records of: (1) the date and time of O2 and NOx measurements, (2) the O2 concentration in percent and the measured NOX concentration corrected to 15% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
23. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type and quantity (cubic feet of gas or gallons of liquid) of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
24. The engine shall be in full compliance with 40 CFR Part 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
25. IC engine shall only be operated in a sparsely populated area as defined by 40 CFR Part 63, Subpart ZZZZ. Permittee shall conduct a review of the surrounding area every 12 months to determine if nearby population has changed. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
26. The permittee must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
27. The engine's oil and filter shall be changed every 2,160 hours of operation or every 12 months, whichever comes first. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
28. The engine's spark plugs shall be inspected every 2,160 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
29. The engine's hoses and belts shall be inspected every 2,160 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
30. The permittee shall maintain monthly records that include any information necessary to demonstrate compliance with 40 CFR 63, ZZZZ. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
31. The permittee shall maintain monthly records of all performance tests and required maintenance performed on the air pollution control and monitoring equipment. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
32. The permittee shall maintain monthly records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. The permittee shall also maintain monthly records of action taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

33. The permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d of Subpart ZZZZ. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
34. Permittee shall have on-site for inspection a District-approved Emissions Control Plan for compliance with District Rule 4702. [District Rule 4702] Federally Enforceable Through Title V Permit
35. The permittee shall maintain on file copies of natural gas bills. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
36. Permittee shall maintain records of annual operating time. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
37. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-4-6-11 **EXPIRATION DATE:** 08/31/2017

SECTION: 5 **TOWNSHIP:** 31S **RANGE:** 25E

EQUIPMENT DESCRIPTION:
LIMITED USE 1070 BHP WAUKESHA MODEL 5790GL S/N 402992 NATURAL GAS-FIRED LEAN-BURN IC ENGINE POWERING A WATER PUMP (IC ENGINE #2, PLANT #1)

PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
2. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702] Federally Enforceable Through Title V Permit
3. Utilization of this IC engine shall not exceed 1,070 hp, as determined by maintaining the water pumping rate for each unit at or below the following amounts: one IC engine/pump operating - 8.2 cfs, two IC engine/pumps operating - 7.8 cfs, and three or more IC engine/pumps operating - 7.3 cfs. [District Rule 2201] Federally Enforceable Through Title V Permit
4. This unit shall only be fired on Public Utility Commission (PUC) regulated natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
5. This engine shall be equipped with a positive crankcase ventilation (PCV) system that directs crankcase emissions into the exhaust system. [District Rule 2201] Federally Enforceable Through Title V Permit
6. IC engine shall be operated no more than 4,000 hours per calendar year. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
7. Emissions from this IC engine shall not exceed any of the following limits: 65 ppmvd NOx @ 15% O2, equivalent to 0.91 g-NOx/hp-hr, 0.011 g-SOx/hp-hr, 0.05 g-PM10/hp-hr, 492 ppmvd CO @ 15% O2, equivalent to 4.18 g-CO/hp-hr, or 309 ppmvd VOC @ 15% O2, equivalent to 1.50 g-VOC/hp-hr. [District Rules 2201, 4701, and 4702] Federally Enforceable Through Title V Permit
8. Source testing to measure natural gas-combustion NOx, CO, and VOC emissions from this unit shall be measured not less than once every 24 months, except as follows. Compliance with the NOx, CO, and VOC emission limits shall be demonstrated by submittal of annual emission test results from a unit or units that represents a specified group of units, provided all of the following requirements are satisfied: the units are located at the same stationary source; the units were produced by the same manufacturer, have the same model number or other manufacturer's designation in common, and have the same rated capacity and operating specification; the units are operated and maintained in a similar manner; and at least 20% of the total number of units are tested during each annual test cycle. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
9. Should any of the representative units exceed the required emission limits, or if the District notifies the operator that the criteria in for representative testing have not been fulfilled, each of the units in the group shall individually demonstrate compliance by emissions testing. Failure to complete emissions testing within 90 days of the failed test shall result in the untested units being in violation of this rule. [District Rule 4702] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

10. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit

11. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. VOC, NOx, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit

12. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) - EPA Method 25 or EPA Method 18 referenced as methane. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit

13. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

14. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

15. The acceptable exhaust gas O2 range shall be established from manufacturer's information, or by source testing this unit. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit

16. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Maintenance (I&M) plan submitted to the District. [District Rule 4702] Federally Enforceable Through Title V Permit

17. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit

18. The permittee shall monitor and record the stack concentration of O2 at least once every month and the stack concentration of NOx and O2 at least once every calendar quarter (in which a source test is not performed) using a portable emission monitor that meets District specifications. [In-stack O2 monitors may be allowed if approved by the APCO.] Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last month. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit

19. If either the O2 concentration or the NOX concentration corrected to 15% O2, as measured by the portable analyzer, is outside the permitted range, the permittee shall return the O2 and/or NOx to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue outside the permitted range after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit

20. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

21. The permittee shall maintain records of: (1) the date and time of O2 and NOx measurements, (2) the O2 concentration in percent and the measured NOX concentration corrected to 15% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit

22. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type and quantity (cubic feet of gas or gallons of liquid) of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit

23. The engine shall be in full compliance with 40 CFR Part 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

24. IC engine shall only be operated in a sparsely populated area as defined by 40 CFR Part 63, Subpart ZZZZ. Permittee shall conduct a review of the surrounding area every 12 months to determine if nearby population has changed. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

25. The permittee must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

26. The engine's oil and filter shall be changed every 2,160 hours of operation or every 12 months, whichever comes first. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

27. The engine's spark plugs shall be inspected every 2,160 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

28. The engine's hoses and belts shall be inspected every 2,160 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

29. The permittee shall maintain monthly records that include any information necessary to demonstrate compliance with 40 CFR 63, ZZZZ. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

30. The permittee shall maintain monthly records of all performance tests and required maintenance performed on the air pollution control and monitoring equipment. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

31. The permittee shall maintain monthly records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. The permittee shall also maintain monthly records of action taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

32. The permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d of Subpart ZZZZ. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

33. Permittee shall have on-site for inspection a District-approved Emissions Control Plan for compliance with District Rule 4702. [District Rule 4702] Federally Enforceable Through Title V Permit

34. The permittee shall maintain on file copies of natural gas bills. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

35. Permittee shall maintain records of annual operating time. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit

36. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-4-7-11 **EXPIRATION DATE:** 08/31/2017

SECTION: 5 **TOWNSHIP:** 31S **RANGE:** 25E

EQUIPMENT DESCRIPTION:
LIMITED USE 1070 BHP WAUKESHA MODEL 5790GL S/N 402993 NATURAL GAS-FIRED LEAN-BURN IC ENGINE POWERING A WATER PUMP (ENGINE #3, PLANT #1)

PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
2. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702] Federally Enforceable Through Title V Permit
3. Utilization of this IC engine shall not exceed 1,070 hp, as determined by maintaining the water pumping rate for each unit at or below the following amounts: one IC engine/pump operating - 8.2 cfs, two IC engine/pumps operating - 7.8 cfs, and three or more IC engine/pumps operating - 7.3 cfs. [District Rule 2201] Federally Enforceable Through Title V Permit
4. This unit shall only be fired on Public Utility Commission (PUC) regulated natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
5. This engine shall be equipped with a positive crankcase ventilation (PCV) system that directs crankcase emissions into the exhaust system. [District Rule 2201] Federally Enforceable Through Title V Permit
6. IC engine shall be operated no more than 4,000 hours per calendar year. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
7. Emissions from this IC engine shall not exceed any of the following limits: 65 ppmvd NOx @ 15% O2, equivalent to 0.91 g-NOx/hp-hr, 0.011 g-SOx/hp-hr, 0.05 g-PM10/hp-hr, 492 ppmvd CO @ 15% O2, equivalent to 4.18 g-CO/hp-hr, or 309 ppmvd VOC @ 15% O2, equivalent to 1.50 g-VOC/hp-hr. [District Rules 2201, 4701, and 4702] Federally Enforceable Through Title V Permit
8. Source testing to measure natural gas-combustion NOx, CO, and VOC emissions from this unit shall be measured not less than once every 24 months, except as follows. Compliance with the NOx, CO, and VOC emission limits shall be demonstrated by submittal of annual emission test results from a unit or units that represents a specified group of units, provided all of the following requirements are satisfied: the units are located at the same stationary source; the units were produced by the same manufacturer, have the same model number or other manufacturer's designation in common, and have the same rated capacity and operating specification; the units are operated and maintained in a similar manner; and at least 20% of the total number of units are tested during each annual test cycle. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
9. Should any of the representative units exceed the required emission limits, or if the District notifies the operator that the criteria in for representative testing have not been fulfilled, each of the units in the group shall individually demonstrate compliance by emissions testing. Failure to complete emissions testing within 90 days of the failed test shall result in the untested units being in violation of this rule. [District Rule 4702] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

10. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit

11. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. VOC, NOx, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit

12. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) - EPA Method 25 or EPA Method 18 referenced as methane. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit

13. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

14. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

15. The acceptable exhaust gas O2 range shall be established from manufacturer's information, or by source testing this unit. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit

16. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Maintenance (I&M) plan submitted to the District. [District Rule 4702] Federally Enforceable Through Title V Permit

17. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit

18. The permittee shall monitor and record the stack concentration of O2 at least once every month and the stack concentration of NOx and O2 at least once every calendar quarter (in which a source test is not performed) using a portable emission monitor that meets District specifications. [In-stack O2 monitors may be allowed if approved by the APCO.] Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last month. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit

19. If either the O2 concentration or the NOX concentration corrected to 15% O2, as measured by the portable analyzer, is outside the permitted range, the permittee shall return the O2 and/or NOx to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue outside the permitted range after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit

20. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

21. The permittee shall maintain records of: (1) the date and time of O2 and NOx measurements, (2) the O2 concentration in percent and the measured NOX concentration corrected to 15% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit

22. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type and quantity (cubic feet of gas or gallons of liquid) of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit

23. The engine shall be in full compliance with 40 CFR Part 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

24. IC engine shall only be operated in a sparsely populated area as defined by 40 CFR Part 63, Subpart ZZZZ. Permittee shall conduct a review of the surrounding area every 12 months to determine if nearby population has changed. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

25. The permittee must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

26. The engine's oil and filter shall be changed every 2,160 hours of operation or every 12 months, whichever comes first. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

27. The engine's spark plugs shall be inspected every 2,160 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

28. The engine's hoses and belts shall be inspected every 2,160 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

29. The permittee shall maintain monthly records that include any information necessary to demonstrate compliance with 40 CFR 63, ZZZZ. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

30. The permittee shall maintain monthly records of all performance tests and required maintenance performed on the air pollution control and monitoring equipment. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

31. The permittee shall maintain monthly records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. The permittee shall also maintain monthly records of action taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

32. The permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d of Subpart ZZZZ. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

33. Permittee shall have on-site for inspection a District-approved Emissions Control Plan for compliance with District Rule 4702. [District Rule 4702] Federally Enforceable Through Title V Permit

34. The permittee shall maintain on file copies of natural gas bills. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

35. Permittee shall maintain records of annual operating time. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit

36. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit

Appendix II
Emissions Profiles

Application Emissions

Permit #: S-4-13-1	Last Updated
Facility: TEHACHAPI-CUMMINGS WATER DIST	01/19/2016 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	1859.0	288.0	447.0	13677.0	3328.0
Daily Emis. Limit (lb/Day)	55.4	0.8	3.0	254.3	9.1
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	464.0	72.0	111.0	3419.0	832.0
Q2:	465.0	72.0	112.0	3419.0	832.0
Q3:	465.0	72.0	112.0	3419.0	832.0
Q4:	465.0	72.0	112.0	3420.0	832.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Application Emissions

Permit #: S-4-12-1	Last Updated
Facility: TEHACHAPI-CUMMINGS WATER DIST	01/19/2016 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	1859.0	288.0	447.0	13677.0	3328.0
Daily Emis. Limit (lb/Day)	55.4	0.8	3.0	254.3	9.1
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	464.0	72.0	111.0	3419.0	832.0
Q2:	465.0	72.0	112.0	3419.0	832.0
Q3:	465.0	72.0	112.0	3419.0	832.0
Q4:	465.0	72.0	112.0	3420.0	832.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Application Emissions

Permit #: S-4-11-1	Last Updated
Facility: TEHACHAPI-CUMMINGS WATER DIST	01/19/2016 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	1859.0	288.0	447.0	13677.0	3328.0
Daily Emis. Limit (lb/Day)	55.4	0.8	3.0	254.3	9.1
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	464.0	72.0	111.0	3419.0	832.0
Q2:	465.0	72.0	112.0	3419.0	832.0
Q3:	465.0	72.0	112.0	3419.0	832.0
Q4:	465.0	72.0	112.0	3420.0	832.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Application Emissions

Permit #: S-4-10-1	Last Updated
Facility: TEHACHAPI-CUMMINGS WATER DIST	01/19/2016 EDGEHILR

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	1859.0	288.0	447.0	13677.0	3328.0
Daily Emis. Limit (lb/Day)	55.4	0.8	3.0	254.3	9.1
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	464.0	72.0	111.0	3419.0	832.0
Q2:	465.0	72.0	112.0	3419.0	832.0
Q3:	465.0	72.0	112.0	3419.0	832.0
Q4:	465.0	72.0	112.0	3420.0	832.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Attachment III
BACT Guideline

ATTACHMENT III

BACT Guideline

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 3.3.12*

Last Update: 3/19/2015

Non-Agricultural Fossil** Fuel-Fired IC Engines > 50 bhp

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	1. For all compression-ignited engines: Use of an engine meeting the latest Tier standard 2. For all spark-ignited engines: 25 ppmvd @ 15% O2 or 0.15 g/bhp-hr	1. For all compression-ignited engines: 50 percent reduction of latest Tier standard for VOC emissions using a catalytic oxidation system. 2. For rich-burn spark-ignited engines: 12 ppmvd @ 15% O2 or 0.069 g/bhp-hr	Electric Motor (except for engines that will be used to generate electricity)
SOx	Compliance with District Rule 4702 SOx Emission Control Requirements		Electric Motor (except for engines that will be used to generate electricity)
PM10	0.06 g/bhp-hr (Total PM)***		Electric Motor (except for engines that will be used to generate electricity)
NOx	0.07 g/bhp-hr or 5 ppmvd @ 15% O2		1. 2 ppmvd @ 15% O2 Natural Gas-Fired Turbine 2. Electric Motor (except for engines that will be used to generate electricity)
CO	1. For compression-ignited engines > 300 bhp and < or = 500 bhp: 49 ppmvd @ 15% O2 2. For compression-ignited engines > 500 bhp: 23 ppmvd @ 15% O2 3. For four stroke lean burn spark-ignited engines > 500 bhp: 47 ppmvd @ 15% O2 4. For all engines rated > or = 2,064 bhp: 33 pmvd @ 15% O2 5. For all other engines (not included in categroies 1 through 4 above): 56 ppmvd @ 15% O2 or 0.6 g/bhp-hr	For all compression-ignited engines: 12 ppmvd @ 15% O2 using an oxidation catalyst	Electric Motor (except for engines that will be used to generate electricity)

** For the purposes of this determination, fossil fuels includes diesel, gasoline, natural gas, propane, kerosene, and similar hydrocarbon compounds derived from petroleum oil or natural gas. Fossil fuels also include similar synthetic fuels such as biodiesel and/or any fuel containing one or more fossil fuels.

***This total PM10 emission limit is based on EPA Method 5 (front hald and back half) testing, which typically yields results as much as four times higher than when using the ISO 8178 Test Method. The ISO 8178 Test Method only reports filterable (i.e. front half) emissions.

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in s a state implementation plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

***This is a Summary Page for this Class of Source**

Attachment IV
BACT Analysis

NOx Emissions

Steady State Operation

Step 1 – Identify All Control Technologies

BACT Guideline 3.3.12 lists an emissions limit of 9 ppmv NOx @ 15% O_2 as Achieved-in-Practice BACT. Technologically Feasible option is listed as 5 ppmv NOx @ 15% O_2 with SCR or equal. Alternate Basic Equipment is the use of a natural gas-fired turbine with a NOx emission rate of 2 ppmv.

Step 2 – Eliminate Technologically Infeasible Options

The alternate basic equipment option, the use of gas turbines meeting 2 ppmv NOx, was intended for projects with 3 MW of electrical output, or greater. Turbines smaller than 3 MW are typically not capable of meeting a 2 ppmv NOx emission limit. Rather, units smaller than 3 MW typically achieve emission limits that are equivalent to the achieved in practice option of 0.15 g/bhp-hr. Therefore, no NOx emission reductions are expected if the electrical output from the unit is less than 3 MW. The proposed engines will have an electrical output of approximately 1 MW each. Therefore, the gas turbine option is not expected to result in lower emissions and will be eliminated from consideration for this project.

The remaining control technologies from Step 1 are technologically feasible.

Step 3 – Rank Remaining Control Technologies by Control Effectiveness

a) 5 ppmv NOx @ 15% O_2 with SCR or equal
b) 9 ppmv NOx @ 15% O_2

Step 4 – Cost Effectiveness Analysis

The applicant is proposing the most stringent control technology from Step 3, above. Therefore no cost-effectiveness analysis is required.

Step 5 – Select BACT

BACT for the engines is an emission limit of 5 ppmv NOx @ 15% O_2, using NSCR.

Commissioning

During commissioning, the engines are operated to remove "bake off" residual oil which can damage the catalyst. During commissioning, a smaller number of catalyst elements is used (sacrificed) for economic reasons. NOx emissions are expected to be higher than steady state i.e. 65 ppmv NOx @ 3% O2 is proposed.

Step 1 – Identify All Control Technologies

0.91 g/hp-hr (65 ppmv NOx @ 3% O2) – limited NSCR catalyst

Operator shall perform expeditious completion of commissioning activities not to exceed 40 cumulative hours during the initial startup of the engine, and shall use good work practice standards to minimize emissions.

Step 2 – Eliminate Technologically Infeasible Options

The control technologies from Step 1 are technologically feasible.

Step 3 – Rank Remaining Control Technologies by Control Effectiveness

0.91 g/hp-hr (65 ppmv NOx @ 3% O2) – limited NSCR catalyst

Operator shall perform expeditious completion of commissioning activities not to exceed 40 cumulative hours during the initial startup of the engine, and shall use good work practice standards to minimize emissions.

Step 4 – Cost Effectiveness Analysis

The applicant is proposing the most stringent control technology from Step 3, above. Therefore no cost-effectiveness analysis is required.

Step 5 – Select BACT

BACT for the engines is an emission limit of 0.91 g/hp-hr (65 ppmv NOx @ 3% O2) using NSCR.

Operator shall perform expeditious completion of commissioning activities not to exceed 40 cumulative hours during the initial startup of the engine, and shall use good work practice standards to minimize emissions.

PM10 Emissions

During commissioning, the engines are operated to remove "bake off" residual oil which can damage the catalyst. Higher PM10 emissions are expected i.e. 0.05 g/hp-hr is proposed.

Steady State

Step 1 – Identify All Control Technologies

BACT Guideline 3.3.12 lists an emissions limit of 0.02 g/bhp-hr as Achieved-in-Practice BACT. No other options are listed as Technologically Feasible or Alternate Basic Equipment.

Step 2 – Eliminate Technologically Infeasible Options

All options are technologically feasible and none will be eliminated.

Step 3 – Rank Remaining Control Technologies by Control Effectiveness

a) 0.02 g/bhp-hr

Step 4 – Cost Effectiveness Analysis

The applicant is proposing the most stringent control technology from Step 3, above. Therefore no cost-effectiveness analysis is required.

Step 5 – Select BACT

BACT for the engines is an emission limit of 0.02 g/bhp-hr.

Commissioning

Step 1 – Identify All Control Technologies

0.05 g/bhp-hr

Operator shall perform expeditious completion of commissioning activities not to exceed 40 cumulative hours during the initial startup of the engine, and shall use good work practice standards to minimize emissions.

Step 2 – Eliminate Technologically Infeasible Options

All options are technologically feasible and none will be eliminated.

Step 3 – Rank Remaining Control Technologies by Control Effectiveness

0.05 g/bhp-hr

Operator shall perform expeditious completion of commissioning activities not to exceed 40 cumulative hours during the initial startup of the engine, and shall use good work practice standards to minimize emissions.

Step 4 – Cost Effectiveness Analysis

The applicant is proposing the most stringent control technology from Step 3, above. Therefore no cost-effectiveness analysis is required.

Step 5 – Select BACT

BACT for the engines is an emission limit of 0.05 g/bhp-hr limited NSCR catalyst

Operator shall perform expeditious completion of commissioning activities not to exceed 40 cumulative hours during the initial startup of the engine, and shall use good work practice standards to minimize emissions.

VOC Emissions

No increase in VOC emission is expected during commissioning.

Step 1 – Identify All Control Technologies

BACT Guideline 3.3.12 lists an emissions limit of 25 ppmv VOC @ 15% O_2 as Achieved-in-Practice BACT. There are no other options listed.

Step 2 – Eliminate Technologically Infeasible Options

There are no technologically infeasible options listed.

Step 3 – Rank Remaining Control Technologies by Control Effectiveness

a) 25 ppmv VOC @ 15% O_2

Step 4 – Cost Effectiveness Analysis

The applicant is proposing the most stringent control technology from Step 3, above. Therefore no cost-effectiveness analysis is required.

Step 5 – Select BACT

BACT for the engines is an emission limit of 25 ppmv VOC @ 15% O_2.

Attachment V
HRA/AAQA

San Joaquin Valley Air Pollution Control District
Risk Management Review

To:	Richard Edgehill – Permit Services
From:	Yu Vu – Technical Services
Date:	January 13, 2015
Facility Name:	Tehachapi Cummins Water District
Location:	Section 14, Township 11N, Range 18W SBB&M
Application #(s):	S-4-10-1, -11-1, 12-1, and -13-1
Project #:	S-1153831

A. RMR SUMMARY

RMR Summary						
Categories	**1,150 BHP NG ICE (Unit 10-1)**	**1,150 BHP NG ICE (Unit 11-1)**	**1,150 BHP NG ICE (Unit 12-1)**	**1,150 BHP NG ICE (Unit 13-1)**	**Project Totals[1]**	**Facility Totals**
Prioritization Score	>1.0	>1.0	>1.0	>1.0	>1.0	>1.0
Acute Hazard Index	0.07	0.07	0.07	0.07	0.28	0.28
Chronic Hazard Index	0.02	0.02	0.02	0.02	0.07	0.07
Maximum Individual Cancer Risk (10^{-6})	7.45[2]	7.65[2]	7.80[2]	7.74[2]	30.63	30.63
T-BACT Required?	**Yes**	**Yes**	**Yes**	**Yes**		
Special Permit Conditions?	**Yes**	**Yes**	**Yes**	**Yes**		

[1] This project is approvable because it satisfies the requirements in FYI 321, Section 3.C (i.e. the impacts from the new replacement units are less than or equal to the impacts from the existing units at all receptors).

[2] The cancer risks for each individual unit are only being used for the determination of each unit's T-BACT applicability.

Proposed Permit Conditions

To ensure that human health risks will not exceed District allowable levels; the following permit conditions must be included for:

Unit # 10-1, 11-1, 12-1, and 13-1

1. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction.
2. The exhaust stack shall be no lower than 6.401 meters in height and no greater than 0.457 meters in diameter.
3. While commissioning any of units S-4-10, S-4-11, S-4-12, or S-4-13, each engine's emission rates shall not exceed the following: 2.31 lb/hr NOx, 0.033 lb/hr SOx, 0.12 lb/hr PM10, and 10.60 lb/hr CO.

4. No more than one (1) of units S-4-10, S-4-11, S-4-12, or S-4-13 may be commissioned at any given time. While commissioning any of these units, any number of the other three (3) units may be operated as long as they are operated under their normal, non-commissioning parameters.
5. Under normal, non-commissioning operation, each engine's emission rates shall not exceed the following: 0.204 lb/hr NOx, 0.033 lb/hr SOx, 0.05 lb/hr PM10, and 10.60 lb/hr CO.
6. Under normal, non-commissioning operation, each engine shall be operated with Non-Selective Catalytic Reduction (NSCR) at all times.

Unit # 10-1

1. Upon startup of the equipment authorized by this ATC, PTO S-4-5 shall be surrendered to the District and the associated equipment shall be removed or rendered inoperable.

Unit # 11-1

1. Upon startup of the equipment authorized by this ATC, PTO S-4-6 shall be surrendered to the District and the associated equipment shall be removed or rendered inoperable.

Unit # 12-1

1. Upon startup of the equipment authorized by this ATC, PTO S-4-7 shall be surrendered to the District and the associated equipment shall be removed or rendered inoperable.

Unit # 13-1

1. Upon startup of the equipment authorized by this ATC, PTO S-4-8 shall be surrendered to the District and the associated equipment shall be removed or rendered inoperable.

T-BACT is required for this unit because of emissions of VOC and PM-10.

B. RMR REPORT

I. Project Description

Technical Services received a request on October 27, 2015, to perform a Risk Management Review for a proposed modification to four (4) 1,150 bhp natural gas-fired IC engines. These engines are to be installed as replacements for unit S-4-5, S-4-6, S-4-7, and S-4-8. In this modification, the applicant is proposing to commission each of the four engines in this project, resulting in a temporary increase in emissions and also requiring an Ambient Air Quality Analysis (AAQA). The engines in this project were previously evaluated for risk in project S-1150704. Due to new information provided by the applicant, the risk for the four engines will be reevaluated along with the AAQA in this project.

II. Analysis

Technical Services performed a prioritization using the District's HEARTs database. Since the total facility prioritization score was greater than one, a refined health risk assessment was required. Emissions calculated using Ventura County emission factors for internal combustion of natural gas (4-stroke rich burn) were input into the HEARTs database. The AERMOD model was used, with the parameters outlined below and meteorological data for 2007-2011 from Arvin to determine the dispersion factors (i.e., the predicted concentration or X divided by the normalized source strength or Q) for a receptor grid. These dispersion factors were input into the San Joaquin Valley APCD's Hazard Assessment and Reporting Program (SHARP) and the Air Dispersion Modeling and Risk Tool (ADMRT) of the Hot Spots Analysis and Reporting Program Version 2 (HARP 2) to calculate the chronic and acute hazard indices and the carcinogenic risk for the project.

The following parameters were used for the review:

Analysis Parameters Unit 10-1, 11-1, 12-1, and 13-1 (each)			
Source Type	Point	**Location Type**	Rural
Stack Height (m)	6.401	**Closest Receptor (m)**	~350
Stack Diameter. (m)	0.457	**Type of Receptor**	Residential
Stack Exit Velocity (m/s)	14.445	**Max Hours per Year**	8,760
Stack Exit Temp. (°K)	853.706	**Fuel Type**	NG
NG Consumption (MMSCF/hr)	0.00974		

Technical Services also performed modeling for criteria pollutants CO, NOx, SOx and PM_{10}. The emission rates used for criteria pollutant modeling were:

Pollutant	lb/hr[1]	lb/yr[1]
NO_X	2.31	1,867
SO_X	0.033	289
PM_{10}	0.12	449
CO	10.60	13,738

[1] Worst-case emissions (includes emissions from commissioning and normal operations).

The results from the Criteria Pollutant Modeling are as follows:

Criteria Pollutant Modeling Results*

Diesel ICE	1 Hour	3 Hours	8 Hours.	24 Hours	Annual
CO	Pass	X	Pass	X	X
NO_x	Pass[1]	X	X	X	Pass
SO_x	Pass	Pass	X	Pass	Pass
PM_{10}	X	X	X	Pass[2]	Pass[3]
$PM_{2.5}$	X	X	X	Pass[2]	Pass[3]

*Results were taken from the attached PSD spreadsheet.
[1]The project was compared to the 1-hour NO2 National Ambient Air Quality Standard that became effective on April 12, 2010 using the District's approved procedures. The Ozone Limiting Method (OLM) was used in accordance with the District's *Assessment of Non-Regulatory Options in AERMOD – Specifically OLM and PVMRM*. A completed AERMOD Non-Regulatory Option checklist is attached.
[2]A refined assessment was performed to compare the ambient air quality impacts from the existing unit(s) against the impacts from the new replacement unit(s). It was determined that the impacts from the replacement units would not cause an increase in impact at any receptor within the vicinity of the unit(s). Per the draft APR1925, this passes the AAQA.
[3]The criteria pollutants are below EPA's level of significance as found in 40 CFR Part 51.165 (b)(2).

III. Conclusion

This project is to replace the existing four (4) NG fired IC engines, one (1) 1,200 BHP and three (3) 1,070 BHP, permitted in the early 1990's. The current units do not require emissions control equipment. The allowable criteria emission factors from the current units are up to 10 to 11 times higher than the proposed units. The proposed units are rated (BHP) less than or slightly greater than the original units. The proposed units are 4-stroke rich burn IC engines that are required to have emissions control equipment (Non-Selective Catalytic Reduction (NSCR) installed. A comparison of the Pre-project and Post-project criteria emissions has demonstrated that criteria emissions from the proposed units are less than those of the current operating units. Additionally, as noted by the RICE NESHAP, engines with SCR are expected to have up to a 76% reduction in toxic emissions compared to uncontrolled engines. When taking the above information into consideration the impacts from the proposed units would be significantly lower than those of the current units. Therefore, per FYI 321 the proposed units are approvable since they would significantly reduce the impacts from the current permitted units.

In accordance with the District's Risk Management Policy, the project is approved with Toxic Best Available Control Technology (T-BACT).

To ensure that human health risks will not exceed District allowable levels; the permit conditions listed on page 1 of this report must be included for this proposed unit.

Per the provisions in the draft APR 1925, this project passes the AAQA.

These conclusions are based on the data provided by the applicant and the project engineer. Therefore, this analysis is valid only as long as the proposed data and parameters do not change.

IV. Attachments

A. RMR request from the project engineer
B. Additional information from the applicant/project engineer

C. Toxic emissions summary
D. Prioritization score
E. Facility Summary

Attachment VI
Compliance Certification

San Joaquin Valley
Unified Air Pollution Control District

TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate box)

[X] SIGNIFICANT PERMIT MODIFICATION
[ ] MINOR PERMIT MODIFICATION
[ ] ADMINISTRATIVE AMENDMENT

COMPANY NAME: TEHACHAPI-CUMMINGS COUNTY WATER DISTRICT	FACILITY ID: S - 4
1. Type of Organization:[ ] Corporation [ ] Sole Ownership [X] Government [ ] Partnership [ ] Utility	
2. Owner's Name: Tehachapi-Cummings County Water District	
3. Agent to the Owner:	

II. COMPLIANCE CERTIFICATION (Read each statement carefully and initial all circles for confirmation):

(JM) Based on information and belief formed after reasonable inquiry, the equipment identified in this application will continue to comply with the applicable federal requirement(s).

(JM) Based on information and belief formed after reasonable inquiry, the equipment identified in this application will comply with applicable federal requirement(s) that will become effective during the permit term, on a timely basis.

(JM) Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted.

(JM) Based on information and belief formed after reasonable inquiry, information and statements in the submitted application package, including all accompanying reports, and required certifications are true accurate and complete.

I declare, under penalty of perjury under the laws of the state of California, that the forgoing is correct and true:

Signature of Responsible Official

October 5, 2015
Date

John A. Martin
Name of Responsible Official (please print)

General Manager
Title of Responsible Official (please print)

Attachment VII
Draft ATCs

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-4-10-1

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: TEHACHAPI-CUMMINGS WATER DIST
MAILING ADDRESS: PO BOX 326
TEHACHAPI, CA 93561

LOCATION: WEST OF TEJON RANCH RD
TEJON RANCH, CA

SECTION: 14 **TOWNSHIP:** 11N **RANGE:** 18W

EQUIPMENT DESCRIPTION:
1,373 BHP WAUKESHA MODEL 5794GSI (OR EQUIVALENT) NATURAL GAS-FIRED RICH-BURN IC ENGINE WITH NON-SELECTIVE CATALYTIC REDUCTION, TURBOCHARGER AND INTERCOOLER POWERING A WATER PUMP

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. This ATC cancels and replaces ATC S-4-10-0. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
4. Horsepower rating of this IC engine shall not exceed 1,150 hp, as determined by maintaining the water pumping rate for each unit at or below the following amounts: one IC engine/pump operating - 8.2 cfs, two IC engine/pumps operating - 7.8 cfs, and three or more IC engine/pumps operating - 7.3 cfs. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Upon startup of the equipment authorized by this ATC, PTO S-4-5-12 shall be surrendered to the District and the associated equipment shall be removed or rendered inoperable to fully mitigate the emissions increase. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DRAFT

Arnaud Marjollet, Director of Permit Services

S-4-10-1 : Feb 1 2010 11:33AM – EDGEHILR : Joint Inspection NOT Required

6. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]

7. The exhaust stack shall be no lower than 6.401 meters in height and no greater than 0.458 meters in diameter. [District Rule 4102]

8. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

9. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

11. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

12. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit

13. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

14. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit

15. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit

16. During the commissioning period, the operator shall perform expeditious completion of commissioning activities, and shall use good work practice standards to minimize emissions. [District Rule 2201] Federally Enforceable Through Title V Permit

17. No more than one (1) of units S-4-10, S-4-11, S-4-12, or S-4-13 may be commissioned at any given time. While commissioning any of these units, any number of the other three (3) units may be operated as long as they are operated under their normal, non-commissioning parameters. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit

18. Air-to-fuel ratio controller(s) shall be maintained and operated appropriately in order to ensure proper operation of the engine and control device to minimize emissions at all times. [District Rule 2201 and 40 CFR 60, Subpart JJJJ] Federally Enforceable Through Title V Permit

19. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702] Federally Enforceable Through Title V Permit

20. This IC engine shall only be fired on Public Utility Commission (PUC) quality natural gas. [District Rules 2201 and 4801] Federally Enforceable Through Title V Permit

21. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702] Federally Enforceable Through Title V Permit

22. Except during the commissioning period emissions from this IC engine shall not exceed any of the following limits: 0.08 g-NOx/bhp-hr or 5 ppmv @ 15% O2, 0.013 g-SOx/bhp-hr, 0.02 g-PM10/bhp-hr, 0.6 g-CO/bhp-hr or 56 ppmv @ 15% O2, 0.15 g-VOC/bhp-hr or 25 ppmv @ 15% O2. [District Rules 2201 and 4702 and 40 CFR 60, Subpart JJJJ] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

23. During the commissioning period not to exceed 40 cumulative hours emissions from this IC engine shall not exceed 0.91 g-NOx/bhp-hr or 65 ppmv @ 15% O2, 0.013 g-SOx/bhp-hr, 0.05 g-PM10/bhp-hr, 13.3 g-CO/bhp-hr or 1,565 ppmv @ 15% O2, 0.15 g-VOC/bhp-hr or 25 ppmv @ 15% O2, VOC referenced as methane. N. [District Rule 2201]

24. While commissioning any of units S-4-10, S-4-11, S-4-12, or S-4-13, each engine's emission rates shall not exceed the following: 2.31 lb/hr NOx, 0.033 lb/hr SOx, 0.12 lb/hr PM10, and 10.60 lb/hr CO. [District Rule 4102]

25. Under normal, non-commissioning operation, each engine's emission rates shall not exceed the following: 0.204 lb/hr NOx, 0.033 lb/hr SOx, 0.05 lb/hr PM10, and 10.60 lb/hr CO. [District Rule 4102]

26. During the commissioning period permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once daily using a portable emission monitor that meets District specifications. If either the NOx or CO concentrations corrected to 15% O2, as measured by the portable analyzer, exceed the allowable emission concentration for commissioning, NSCR catalyst unit(s) shall be added and/or replaced as necessary to bring the unit back into compliance. [District Rule 2201]

27. Source testing to measure natural gas fuel combustion NOx, CO, and VOC emissions from this unit shall be conducted within 60 days of initial start-up and once every 8,760 hours of operation or 24 months, whichever comes first, thereafter. [District Rules 1081, 2201, and 4702 and 40 CFR 60, Subpart JJJJ] Federally Enforceable Through Title V Permit

28. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702] Federally Enforceable Through Title V Permit

29. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

30. For official emissions source testing, the arithmetic average of three 60-consecutive-minute test runs shall apply. Each test run shall be conducted within 10 percent of 100 percent peak (or the highest achievable) load. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as both methane and as propane. VOC, NOx, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702 and 40 CFR 60, Subpart JJJJ] Federally Enforceable Through Title V Permit

31. The following methods shall be used for official source testing: NOx (ppmv) - EPA Method 7E or ARB method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, VOC (ppmv) - EPA Method 25A or 25B, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100. Alternative test methods as approved by EPA, ARB, and the District may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4702 and 40 CFR 60, Subpart JJJJ] Federally Enforceable Through Title V Permit

32. The results of each source test shall be submitted to the District and EPA within 60 days after completion of the source test. [District Rule 1081 and 40 CFR 60, Subpart JJJJ] Federally Enforceable Through Title V Permit

33. This engine shall be operated and maintained in proper operating condition according to the manufacturer's specifications and the Rule 4702 Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702] Federally Enforceable Through Title V Permit

34. During non-commissioning operation, the permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every calendar quarter (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall be performed not less than once every month for 12 months if 2 consecutive deviations are observed during quarterly monitoring. Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the last quarter if on a quarterly monitoring schedule. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

35. During non-commissioning operation, if either the NOx or CO concentrations corrected to 15% O2, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit

36. During non-commissioning operation, all alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4702] Federally Enforceable Through Title V Permit

37. During both commissioning and non-commissioning operation, the permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 15% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Federally Enforceable Through Title V Permit

38. The results of the measurements taken with the District approved analyzer shall be retained on-site at all times. [District Rule 1081] Federally Enforceable Through Title V Permit

39. The owner/operator shall submit to the APCO for approval, and Inspection and Maintenance (I&M) plan that specifies all actions to be taken to satisfy all of the requirements of Rule 4702 Sections 5.8 and 6.5. [District Rule 4702] Federally Enforceable Through Title V Permit

40. The operator shall collect data through the I&M plan in a form approved by the APCO. [District Rule 4702] Federally Enforceable Through Title V Permit

41. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit

42. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: the total hours of operation, type of fuel used, maintenance and modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rule 4702 and 40 CFR 60, Subpart JJJJ] Federally Enforceable Through Title V Permit

43. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. For units at unstaffed sites or operated remotely, records may be maintained and retained at a District-approved off-site location. [District Rule 4702] Federally Enforceable Through Title V Permit

44. Notification of the date construction of this engine commenced shall be submitted to the District and EPA and shall be postmarked no later than 30 days after such date as construction commenced. The notification shall contain the following information: 1) Name and address of the owner or operator; 2) The address of the affected source; 3) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement; 4) Emission control equipment; and 5) Fuel used. Notification of construction and copies of source test results shall be submitted to EPA at the following address: Director, Air Division, U.S. Environmental Protection Agency, 75 Hawthorne Street, San Francisco, CA 94105. [40 CFR 60, Subpart JJJJ] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-4-11-1

ISSUANCE DATE: DRAFT

DRAFT

LEGAL OWNER OR OPERATOR: TEHACHAPI-CUMMINGS WATER DIST
MAILING ADDRESS: PO BOX 326
TEHACHAPI, CA 93561

LOCATION: WEST OF TEJON RANCH RD
TEJON RANCH, CA

SECTION: 14 **TOWNSHIP:** 11N **RANGE:** 18W

EQUIPMENT DESCRIPTION:
1,373 BHP WAUKESHA MODEL 5794GSI (OR EQUIVALENT) NATURAL GAS-FIRED RICH-BURN IC ENGINE WITH NON-SELECTIVE CATALYTIC REDUCTION, TURBOCHARGER AND INTERCOOLER POWERING A WATER PUMP

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. This ATC cancels and replaces ATC S-4-11-0. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
4. Horsepower rating of this IC engine shall not exceed 1,150 hp, as determined by maintaining the water pumping rate for each unit at or below the following amounts: one IC engine/pump operating - 8.2 cfs, two IC engine/pumps operating - 7.8 cfs, and three or more IC engine/pumps operating - 7.3 cfs. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Upon startup of the equipment authorized by this ATC, PTO S-4-6-11 shall be surrendered to the District and the associated equipment shall be removed or rendered inoperable to fully mitigate the emissions increase. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DRAFT

Arnaud Marjollet, Director of Permit Services

S-4-11-1 : Feb 2 2016 2:00PM -- EDGEHILR : Joint Inspection NOT Required

6. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]

7. The exhaust stack shall be no lower than 6.401 meters in height and no greater than 0.458 meters in diameter. [District Rule 4102]

8. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

9. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

11. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

12. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit

13. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

14. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit

15. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit

16. During the commissioning period, the operator shall perform expeditious completion of commissioning activities, and shall use good work practice standards to minimize emissions. [District Rule 2201] Federally Enforceable Through Title V Permit

17. No more than one (1) of units S-4-10, S-4-11, S-4-12, or S-4-13 may be commissioned at any given time. While commissioning any of these units, any number of the other three (3) units may be operated as long as they are operated under their normal, non-commissioning parameters. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit

18. Air-to-fuel ratio controller(s) shall be maintained and operated appropriately in order to ensure proper operation of the engine and control device to minimize emissions at all times. [District Rule 2201 and 40 CFR 60, Subpart JJJJ] Federally Enforceable Through Title V Permit

19. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702] Federally Enforceable Through Title V Permit

20. This IC engine shall only be fired on Public Utility Commission (PUC) quality natural gas. [District Rules 2201 and 4801] Federally Enforceable Through Title V Permit

21. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702] Federally Enforceable Through Title V Permit

22. Except during the commissioning period emissions from this IC engine shall not exceed any of the following limits: 0.08 g-NOx/bhp-hr or 5 ppmv @ 15% O2, 0.013 g-SOx/bhp-hr, 0.02 g-PM10/bhp-hr, 0.6 g-CO/bhp-hr or 56 ppmv @ 15% O2, 0.15 g-VOC/bhp-hr or 25 ppmv @ 15% O2. [District Rules 2201 and 4702 and 40 CFR 60, Subpart JJJJ] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

23. During the commissioning period not to exceed 40 cumulative hours emissions from this IC engine shall not exceed 0.91 g-NOx/bhp-hr or 65 ppmv @ 15% O2, 0.013 g-SOx/bhp-hr, 0.05 g-PM10/bhp-hr, 13.3 g-CO/bhp-hr or 1,565 ppmv @ 15% O2, 0.15 g-VOC/bhp-hr or 25 ppmv @ 15% O2, VOC referenced as methane. N. [District Rule 2201]

24. While commissioning any of units S-4-10, S-4-11, S-4-12, or S-4-13, each engine's emission rates shall not exceed the following: 2.31 lb/hr NOx, 0.033 lb/hr SOx, 0.12 lb/hr PM10, and 10.60 lb/hr CO. [District Rule 4102]

25. Under normal, non-commissioning operation, each engine's emission rates shall not exceed the following: 0.204 lb/hr NOx, 0.033 lb/hr SOx, 0.05 lb/hr PM10, and 10.60 lb/hr CO. [District Rule 4102]

26. During the commissioning period permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once daily using a portable emission monitor that meets District specifications. If either the NOx or CO concentrations corrected to 15% O2, as measured by the portable analyzer, exceed the allowable emission concentration for commissioning, NSCR catalyst unit(s) shall be added and/or replaced as necessary to bring the unit back into compliance. [District Rule 2201]

27. Source testing to measure natural gas fuel combustion NOx, CO, and VOC emissions from this unit shall be conducted within 60 days of initial start-up and once every 8,760 hours of operation or 24 months, whichever comes first, thereafter. [District Rules 1081, 2201, and 4702 and 40 CFR 60, Subpart JJJJ] Federally Enforceable Through Title V Permit

28. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702] Federally Enforceable Through Title V Permit

29. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

30. For official emissions source testing, the arithmetic average of three 60-consecutive-minute test runs shall apply. Each test run shall be conducted within 10 percent of 100 percent peak (or the highest achievable) load. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as both methane and as propane. VOC, NOx, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702 and 40 CFR 60, Subpart JJJJ] Federally Enforceable Through Title V Permit

31. The following methods shall be used for official source testing: NOx (ppmv) - EPA Method 7E or ARB method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, VOC (ppmv) - EPA Method 25A or 25B, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100. Alternative test methods as approved by EPA, ARB, and the District may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4702 and 40 CFR 60, Subpart JJJJ] Federally Enforceable Through Title V Permit

32. The results of each source test shall be submitted to the District and EPA within 60 days after completion of the source test. [District Rule 1081 and 40 CFR 60, Subpart JJJJ] Federally Enforceable Through Title V Permit

33. This engine shall be operated and maintained in proper operating condition according to the manufacturer's specifications and the Rule 4702 Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702] Federally Enforceable Through Title V Permit

34. During non-commissioning operation, the permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every calendar quarter (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall be performed not less than once every month for 12 months if 2 consecutive deviations are observed during quarterly monitoring. Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the last quarter if on a quarterly monitoring schedule. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

35. During non-commissioning operation, if either the NOx or CO concentrations corrected to 15% O2, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit

36. During non-commissioning operation, all alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4702] Federally Enforceable Through Title V Permit

37. During both commissioning and non-commissioning operation, the permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 15% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Federally Enforceable Through Title V Permit

38. The results of the measurements taken with the District approved analyzer shall be retained on-site at all times. [District Rule 1081] Federally Enforceable Through Title V Permit

39. The owner/operator shall submit to the APCO for approval, and Inspection and Maintenance (I&M) plan that specifies all actions to be taken to satisfy all of the requirements of Rule 4702 Sections 5.8 and 6.5. [District Rule 4702] Federally Enforceable Through Title V Permit

40. The operator shall collect data through the I&M plan in a form approved by the APCO. [District Rule 4702] Federally Enforceable Through Title V Permit

41. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit

42. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: the total hours of operation, type of fuel used, maintenance and modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rule 4702 and 40 CFR 60, Subpart JJJJ] Federally Enforceable Through Title V Permit

43. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. For units at unstaffed sites or operated remotely, records may be maintained and retained at a District-approved off-site location. [District Rule 4702] Federally Enforceable Through Title V Permit

44. Notification of the date construction of this engine commenced shall be submitted to the District and EPA and shall be postmarked no later than 30 days after such date as construction commenced. The notification shall contain the following information: 1) Name and address of the owner or operator; 2) The address of the affected source; 3) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement; 4) Emission control equipment; and 5) Fuel used. Notification of construction and copies of source test results shall be submitted to EPA at the following address: Director, Air Division, U.S. Environmental Protection Agency, 75 Hawthorne Street, San Francisco, CA 94105. [40 CFR 60, Subpart JJJJ] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-4-12-1 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: TEHACHAPI-CUMMINGS WATER DIST
MAILING ADDRESS: PO BOX 326
TEHACHAPI, CA 93561

LOCATION: WEST OF TEJON RANCH RD
TEJON RANCH, CA

SECTION: 14 **TOWNSHIP:** 11N **RANGE:** 18W

EQUIPMENT DESCRIPTION:
1,373 BHP WAUKESHA MODEL 5794GSI (OR EQUIVALENT) NATURAL GAS-FIRED RICH-BURN IC ENGINE WITH NON-SELECTIVE CATALYTIC REDUCTION, TURBOCHARGER AND INTERCOOLER POWERING A WATER PUMP

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. This ATC cancels and replaces ATC S-4-12-0. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
4. Horsepower rating of this IC engine shall not exceed 1,150 hp, as determined by maintaining the water pumping rate for each unit at or below the following amounts: one IC engine/pump operating - 8.2 cfs, two IC engine/pumps operating - 7.8 cfs, and three or more IC engine/pumps operating - 7.3 cfs. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Upon startup of the equipment authorized by this ATC, PTO S-4-7-11 shall be surrendered to the District and the associated equipment shall be removed or rendered inoperable to fully mitigate the emissions increase. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

Arnaud Marjollet, Director of Permit Services
S-4-12-1 : Feb 2 2016 2:00PM – EQCEHILR : Joint Inspection NOT Required

6. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]

7. The exhaust stack shall be no lower than 6.401 meters in height and no greater than 0.458 meters in diameter. [District Rule 4102]

8. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

9. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

11. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

12. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit

13. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

14. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit

15. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit

16. During the commissioning period, the operator shall perform expeditious completion of commissioning activities, and shall use good work practice standards to minimize emissions. [District Rule 2201] Federally Enforceable Through Title V Permit

17. No more than one (1) of units S-4-10, S-4-11, S-4-12, or S-4-13 may be commissioned at any given time. While commissioning any of these units, any number of the other three (3) units may be operated as long as they are operated under their normal, non-commissioning parameters. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit

18. Air-to-fuel ratio controller(s) shall be maintained and operated appropriately in order to ensure proper operation of the engine and control device to minimize emissions at all times. [District Rule 2201 and 40 CFR 60, Subpart JJJJ] Federally Enforceable Through Title V Permit

19. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702] Federally Enforceable Through Title V Permit

20. This IC engine shall only be fired on Public Utility Commission (PUC) quality natural gas. [District Rules 2201 and 4801] Federally Enforceable Through Title V Permit

21. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702] Federally Enforceable Through Title V Permit

22. Except during the commissioning period emissions from this IC engine shall not exceed any of the following limits: 0.08 g-NOx/bhp-hr or 5 ppmv @ 15% O2, 0.013 g-SOx/bhp-hr, 0.02 g-PM10/bhp-hr, 0.6 g-CO/bhp-hr or 56 ppmv @ 15% O2, 0.15 g-VOC/bhp-hr or 25 ppmv @ 15% O2. [District Rules 2201 and 4702 and 40 CFR 60, Subpart JJJJ] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

23. During the commissioning period not to exceed 40 cumulative hours emissions from this IC engine shall not exceed 0.91 g-NOx/bhp-hr or 65 ppmv @ 15% O2, 0.013 g-SOx/bhp-hr, 0.05 g-PM10/bhp-hr, 13.3 g-CO/bhp-hr or 1,565 ppmv @ 15% O2, 0.15 g-VOC/bhp-hr or 25 ppmv @ 15% O2, VOC referenced as methane. N. [District Rule 2201]

24. While commissioning any of units S-4-10, S-4-11, S-4-12, or S-4-13, each engine's emission rates shall not exceed the following: 2.31 lb/hr NOx, 0.033 lb/hr SOx, 0.12 lb/hr PM10, and 10.60 lb/hr CO. [District Rule 4102]

25. Under normal, non-commissioning operation, each engine's emission rates shall not exceed the following: 0.204 lb/hr NOx, 0.033 lb/hr SOx, 0.05 lb/hr PM10, and 10.60 lb/hr CO. [District Rule 4102]

26. During the commissioning period permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once daily using a portable emission monitor that meets District specifications. If either the NOx or CO concentrations corrected to 15% O2, as measured by the portable analyzer, exceed the allowable emission concentration for commissioning, NSCR catalyst unit(s) shall be added and/or replaced as necessary to bring the unit back into compliance. [District Rule 2201]

27. Source testing to measure natural gas fuel combustion NOx, CO, and VOC emissions from this unit shall be conducted within 60 days of initial start-up and once every 8,760 hours of operation or 24 months, whichever comes first, thereafter. [District Rules 1081, 2201, and 4702 and 40 CFR 60, Subpart JJJJ] Federally Enforceable Through Title V Permit

28. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702] Federally Enforceable Through Title V Permit

29. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

30. For official emissions source testing, the arithmetic average of three 60-consecutive-minute test runs shall apply. Each test run shall be conducted within 10 percent of 100 percent peak (or the highest achievable) load. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as both methane and as propane. VOC, NOx, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702 and 40 CFR 60, Subpart JJJJ] Federally Enforceable Through Title V Permit

31. The following methods shall be used for official source testing: NOx (ppmv) - EPA Method 7E or ARB method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, VOC (ppmv) - EPA Method 25A or 25B, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100. Alternative test methods as approved by EPA, ARB, and the District may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4702 and 40 CFR 60, Subpart JJJJ] Federally Enforceable Through Title V Permit

32. The results of each source test shall be submitted to the District and EPA within 60 days after completion of the source test. [District Rule 1081 and 40 CFR 60, Subpart JJJJ] Federally Enforceable Through Title V Permit

33. This engine shall be operated and maintained in proper operating condition according to the manufacturer's specifications and the Rule 4702 Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702] Federally Enforceable Through Title V Permit

34. During non-commissioning operation, the permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every calendar quarter (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall be performed not less than once every month for 12 months if 2 consecutive deviations are observed during quarterly monitoring. Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the last quarter if on a quarterly monitoring schedule. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

35. During non-commissioning operation, if either the NOx or CO concentrations corrected to 15% O2, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit

36. During non-commissioning operation, all alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4702] Federally Enforceable Through Title V Permit

37. During both commissioning and non-commissioning operation, the permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 15% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Federally Enforceable Through Title V Permit

38. The results of the measurements taken with the District approved analyzer shall be retained on-site at all times. [District Rule 1081] Federally Enforceable Through Title V Permit

39. The owner/operator shall submit to the APCO for approval, and Inspection and Maintenance (I&M) plan that specifies all actions to be taken to satisfy all of the requirements of Rule 4702 Sections 5.8 and 6.5. [District Rule 4702] Federally Enforceable Through Title V Permit

40. The operator shall collect data through the I&M plan in a form approved by the APCO. [District Rule 4702] Federally Enforceable Through Title V Permit

41. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit

42. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: the total hours of operation, type of fuel used, maintenance and modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rule 4702 and 40 CFR 60, Subpart JJJJ] Federally Enforceable Through Title V Permit

43. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. For units at unstaffed sites or operated remotely, records may be maintained and retained at a District-approved off-site location. [District Rule 4702] Federally Enforceable Through Title V Permit

44. Notification of the date construction of this engine commenced shall be submitted to the District and EPA and shall be postmarked no later than 30 days after such date as construction commenced. The notification shall contain the following information: 1) Name and address of the owner or operator; 2) The address of the affected source; 3) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement; 4) Emission control equipment; and 5) Fuel used. Notification of construction and copies of source test results shall be submitted to EPA at the following address: Director, Air Division, U.S. Environmental Protection Agency, 75 Hawthorne Street, San Francisco, CA 94105. [40 CFR 60, Subpart JJJJ] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-4-13-1

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: TEHACHAPI-CUMMINGS WATER DIST
MAILING ADDRESS: PO BOX 326
TEHACHAPI, CA 93561

LOCATION: WEST OF TEJON RANCH RD
TEJON RANCH, CA

SECTION: 14 **TOWNSHIP:** 11N **RANGE:** 18W

EQUIPMENT DESCRIPTION:
1,373 BHP WAUKESHA MODEL 5794GSI (OR EQUIVALENT) NATURAL GAS-FIRED RICH-BURN IC ENGINE WITH NON-SELECTIVE CATALYTIC REDUCTION, TURBOCHARGER AND INTERCOOLER POWERING A WATER PUMP

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. This ATC cancels and replaces ATC S-4-13-0. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
4. Horsepower rating of this IC engine shall not exceed 1,150 hp, as determined by maintaining the water pumping rate for each unit at or below the following amounts: one IC engine/pump operating - 8.2 cfs, two IC engine/pumps operating - 7.8 cfs, and three or more IC engine/pumps operating - 7.3 cfs. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Upon startup of the equipment authorized by this ATC, PTO S-4-8-12 shall be surrendered to the District and the associated equipment shall be removed or rendered inoperable to fully mitigate the emissions increase. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DRAFT

Arnaud Marjollet, Director of Permit Services

S-4-13-1 : Feb 2 2016 2:00PM – EDGEHOLR : Joint Inspection NOT Required

6. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
7. The exhaust stack shall be no lower than 6.401 meters in height and no greater than 0.458 meters in diameter. [District Rule 4102]
8. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
11. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit
12. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
13. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
14. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
15. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
16. During the commissioning period, the operator shall perform expeditious completion of commissioning activities, and shall use good work practice standards to minimize emissions. [District Rule 2201] Federally Enforceable Through Title V Permit
17. No more than one (1) of units S-4-10, S-4-11, S-4-12, or S-4-13 may be commissioned at any given time. While commissioning any of these units, any number of the other three (3) units may be operated as long as they are operated under their normal, non-commissioning parameters. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
18. Air-to-fuel ratio controller(s) shall be maintained and operated appropriately in order to ensure proper operation of the engine and control device to minimize emissions at all times. [District Rule 2201 and 40 CFR 60, Subpart JJJJ] Federally Enforceable Through Title V Permit
19. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702] Federally Enforceable Through Title V Permit
20. This IC engine shall only be fired on Public Utility Commission (PUC) quality natural gas. [District Rules 2201 and 4801] Federally Enforceable Through Title V Permit
21. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702] Federally Enforceable Through Title V Permit
22. Except during the commissioning period emissions from this IC engine shall not exceed any of the following limits: 0.08 g-NOx/bhp-hr or 5 ppmv @ 15% O2, 0.013 g-SOx/bhp-hr, 0.02 g-PM10/bhp-hr, 0.6 g-CO/bhp-hr or 56 ppmv @ 15% O2, 0.15 g-VOC/bhp-hr or 25 ppmv @ 15% O2. [District Rules 2201 and 4702 and 40 CFR 60, Subpart JJJJ] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

23. During the commissioning period not to exceed 40 cumulative hours emissions from this IC engine shall not exceed 0.91 g-NOx/bhp-hr or 65 ppmv @ 15% O2, 0.013 g-SOx/bhp-hr, 0.05 g-PM10/bhp-hr, 13.3 g-CO/bhp-hr or 1,565 ppmv @ 15% O2, 0.15 g-VOC/bhp-hr or 25 ppmv @ 15% O2, VOC referenced as methane. N. [District Rule 2201]
24. While commissioning any of units S-4-10, S-4-11, S-4-12, or S-4-13, each engine's emission rates shall not exceed the following: 2.31 lb/hr NOx, 0.033 lb/hr SOx, 0.12 lb/hr PM10, and 10.60 lb/hr CO. [District Rule 4102]
25. Under normal, non-commissioning operation, each engine's emission rates shall not exceed the following: 0.204 lb/hr NOx, 0.033 lb/hr SOx, 0.05 lb/hr PM10, and 10.60 lb/hr CO. [District Rule 4102]
26. During the commissioning period permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once daily using a portable emission monitor that meets District specifications. If either the NOx or CO concentrations corrected to 15% O2, as measured by the portable analyzer, exceed the allowable emission concentration for commissioning, NSCR catalyst unit(s) shall be added and/or replaced as necessary to bring the unit back into compliance. [District Rule 2201]
27. Source testing to measure natural gas fuel combustion NOx, CO, and VOC emissions from this unit shall be conducted within 60 days of initial start-up and once every 8,760 hours of operation or 24 months, whichever comes first, thereafter. [District Rules 1081, 2201, and 4702 and 40 CFR 60, Subpart JJJJ] Federally Enforceable Through Title V Permit
28. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702] Federally Enforceable Through Title V Permit
29. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
30. For official emissions source testing, the arithmetic average of three 60-consecutive-minute test runs shall apply. Each test run shall be conducted within 10 percent of 100 percent peak (or the highest achievable) load. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as both methane and as propane. VOC, NOx, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702 and 40 CFR 60, Subpart JJJJ] Federally Enforceable Through Title V Permit
31. The following methods shall be used for official source testing: NOx (ppmv) - EPA Method 7E or ARB method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, VOC (ppmv) - EPA Method 25A or 25B, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100. Alternative test methods as approved by EPA, ARB, and the District may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4702 and 40 CFR 60, Subpart JJJJ] Federally Enforceable Through Title V Permit
32. The results of each source test shall be submitted to the District and EPA within 60 days after completion of the source test. [District Rule 1081 and 40 CFR 60, Subpart JJJJ] Federally Enforceable Through Title V Permit
33. This engine shall be operated and maintained in proper operating condition according to the manufacturer's specifications and the Rule 4702 Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702] Federally Enforceable Through Title V Permit
34. During non-commissioning operation, the permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every calendar quarter (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall be performed not less than once every month for 12 months if 2 consecutive deviations are observed during quarterly monitoring. Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the last quarter if on a quarterly monitoring schedule. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

35. During non-commissioning operation, if either the NOx or CO concentrations corrected to 15% O2, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit

36. During non-commissioning operation, all alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4702] Federally Enforceable Through Title V Permit

37. During both commissioning and non-commissioning operation, the permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 15% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Federally Enforceable Through Title V Permit

38. The results of the measurements taken with the District approved analyzer shall be retained on-site at all times. [District Rule 1081] Federally Enforceable Through Title V Permit

39. The owner/operator shall submit to the APCO for approval, and Inspection and Maintenance (I&M) plan that specifies all actions to be taken to satisfy all of the requirements of Rule 4702 Sections 5.8 and 6.5. [District Rule 4702] Federally Enforceable Through Title V Permit

40. The operator shall collect data through the I&M plan in a form approved by the APCO. [District Rule 4702] Federally Enforceable Through Title V Permit

41. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit

42. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: the total hours of operation, type of fuel used, maintenance and modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rule 4702 and 40 CFR 60, Subpart JJJJ] Federally Enforceable Through Title V Permit

43. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. For units at unstaffed sites or operated remotely, records may be maintained and retained at a District-approved off-site location. [District Rule 4702] Federally Enforceable Through Title V Permit

44. Notification of the date construction of this engine commenced shall be submitted to the District and EPA and shall be postmarked no later than 30 days after such date as construction commenced. The notification shall contain the following information: 1) Name and address of the owner or operator; 2) The address of the affected source; 3) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement; 4) Emission control equipment; and 5) Fuel used. Notification of construction and copies of source test results shall be submitted to EPA at the following address: Director, Air Division, U.S. Environmental Protection Agency, 75 Hawthorne Street, San Francisco, CA 94105. [40 CFR 60, Subpart JJJJ] Federally Enforceable Through Title V Permit